

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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JUSTIN D. CARTER

CONSULTING GEOLOGIST

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: LYDA RUTTI 2-8
Well Id:
Location: S/2, NE, SW, SE Sec. 8 - 22S - 13W Stafford Co., KS
License Number: 15-185-24066-0000
Spud Date: 02/17/20
Surface Coordinates: 920' FSL, 1650' FEL
Region: Besthorn SW
Drilling Completed: 02/26/20

Bottom Hole
Coordinates:
Ground Elevation (ft): 1897' K.B. Elevation (ft): 1905'
Logged Interval (ft): 3100' To: 3920' Total Depth (ft): 3920'
Formation: L/KC, VIOLA, SIMPSON, ARBUCKLE
Type of Drilling Fluid: Chemical Mud

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: JEL RESOURCES, LLC
Address: 6545 S. Riviera Way
Aurora, CO 80016-2688
Co. Geo.: Mr. Michael Connelly

GEOLOGIST

Name: Justin D. Carter
Company: Consulting Geologist
Address: 1640 N. Roosevelt Ave.
Liberal, KS 67901
Phone: 620-655-1187

Comments

Drilling Contractor: Discovery Drilling Rig #2
Tool Pusher: Terry Wickham

8 5/8" surface casing set at 435'

Mud: MudCo
Engineer: Jason Whiting

Gas Detector: Blue Stem

DSTs: Trilobite Testing
Tester: Benny Mulligan

Open-Hole Loggers: Pioneer Wireline



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3630

Lyda Rutti #2-8

ATTN: Justin Carter

Job Ticket: 65751

DST#: 1

Test Start: 2020.02.22 @ 15:48:00

GENERAL INFORMATION:

Formation: **Lansing C-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:15:00

Time Test Ended: 22:29:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Benny Mulligan

Unit No: 66

Interval: **3436.00 ft (KB) To 3470.00 ft (KB) (TVD)**

Total Depth: 3470.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1905.00 ft (KB)

1897.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 6772

Inside

Press@RunDepth: 52.32 psig @ 3437.00 ft (KB)

Start Date: 2020.02.22

End Date:

2020.02.22

Start Time: 15:48:01

End Time:

22:29:30

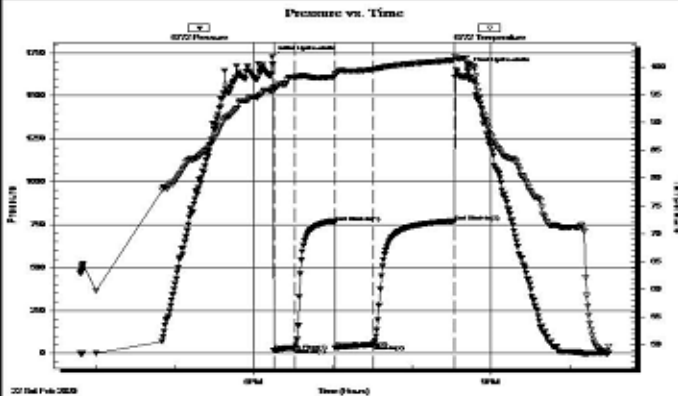
Capacity: 8000.00 psig

Last Calib.: 2020.02.22

Time On Btm: 2020.02.22 @ 18:14:00

Time Off Btm: 2020.02.22 @ 20:41:50

TEST COMMENT: IF-15- built to 3"
 ISI-30- weak surface blow back
 FF-30- built to 2"
 FSI-60- no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1726.99	95.12	Initial Hydro-static
1	15.79	95.69	Open To Flow (1)
17	31.24	98.22	Shut-in(1)
47	765.43	98.19	End Shut-In(1)
48	33.59	98.29	Open To Flow (2)
77	52.32	99.57	Shut-in(2)
138	768.72	101.21	End Shut-In(2)
148	1660.01	100.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%M	0.21
60.00	W.M. 40%W60%M	0.42

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcft/d)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3630

Lyda Rutti #2-8

ATTN: Justin Carter

Job Ticket: 65752

DST#: 2

Test Start: 2020.02.23 @ 14:14:00

GENERAL INFORMATION:

Formation: **LKC I-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:36:10

Time Test Ended: 21:15:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Benny Mulligan

Unit No: 66

Interval: **3556.00 ft (KB) To 3600.00 ft (KB) (TVD)**

Reference Elevations: 1905.00 ft (KB)

Total Depth: 3600.00 ft (KB) (TVD)

1897.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6772

Inside

Press@RunDepth: 53.88 psig @ 3564.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.02.23

End Date:

2020.02.23

Last Calib.: 2020.02.23

Start Time: 14:14:01

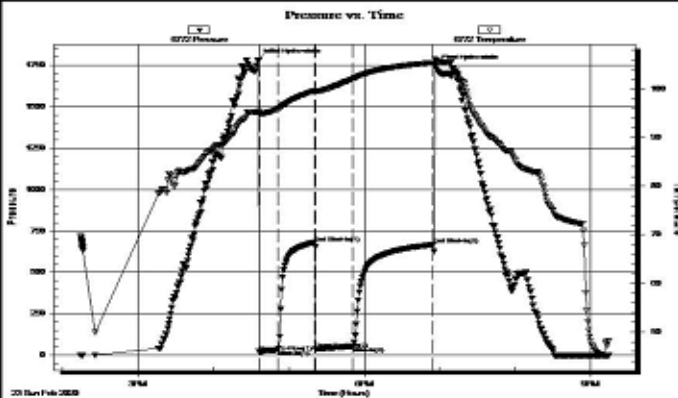
End Time:

21:15:00

Time On Btm: 2020.02.23 @ 16:35:10

Time Off Btm: 2020.02.23 @ 18:56:39

TEST COMMENT: IF-15- built to 2 1/2"
ISI-30- no blow back
FF-30- built to 3"
FSI-60- no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1781.51	95.30	Initial Hydro-static
1	21.72	94.78	Open To Flow (1)
17	32.91	95.94	Shut-in(1)
46	680.65	99.59	End Shut-In(1)
46	36.51	99.42	Open To Flow (2)
76	53.88	102.06	Shut-in(2)
140	667.65	105.40	End Shut-In(2)
142	1743.10	105.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	M.V. 40%M 60%M	0.57

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcft/d)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3630

Lyda Rutti #2-8

ATTN: Justin Carter

Job Ticket: 65753

DST#: 3

Test Start: 2020.02.24 @ 05:18:00

GENERAL INFORMATION:

Formation: **LKC "K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:45:20

Time Test Ended: 11:53:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Benny Mulligan

Unit No: 66

Interval: **3596.00 ft (KB) To 3630.00 ft (KB) (TVD)**

Reference Elevations: 1905.00 ft (KB)

Total Depth: 3630.00 ft (KB) (TVD)

1897.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6772

Inside

Press@RunDepth: 24.72 psig @ 3597.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.02.24

End Date:

2020.02.24

Last Calib.: 2020.02.24

Start Time: 05:18:01

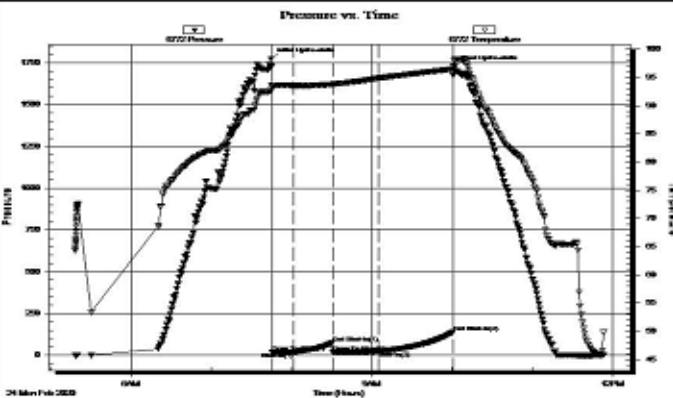
End Time:

11:53:30

Time On Btm: 2020.02.24 @ 07:44:30

Time Off Btm: 2020.02.24 @ 10:02:00

TEST COMMENT: IF-15- built to 1"
ISI-30- no blow back
FF-30- weak surface blow
FSI-60- no blow back



PRESSURE SUMMARY

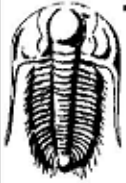
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1772.90	93.01	Initial Hydro-static
1	20.64	93.31	Open To Flow (1)
17	20.52	93.58	Shut-in(1)
46	72.39	93.82	End Shut-In(1)
47	21.03	93.81	Open To Flow (2)
81	24.72	94.90	Shut-in(2)
136	137.56	96.50	End Shut-In(2)
138	1726.88	98.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%M	0.21

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcft/d)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3630

Lyda Rutti #2-8

ATTN: Justin Carter

Job Ticket: 65754

DST#: 4

Test Start: 2020.02.25 @ 03:34:00

GENERAL INFORMATION:

Formation: **Simpson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:37:50

Time Test Ended: 10:01:09

Test Type: Conventional Bottom Hole (Initial)

Tester: Benny Mulligan

Unit No: 66

Interval: **3762.00 ft (KB) To 3810.00 ft (KB) (TVD)**

Reference Elevations: 1905.00 ft (KB)

Total Depth: 3810.00 ft (KB) (TVD)

1897.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6772

Inside

Press@RunDepth: 70.05 psig @ 3763.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.02.25 End Date: 2020.02.25

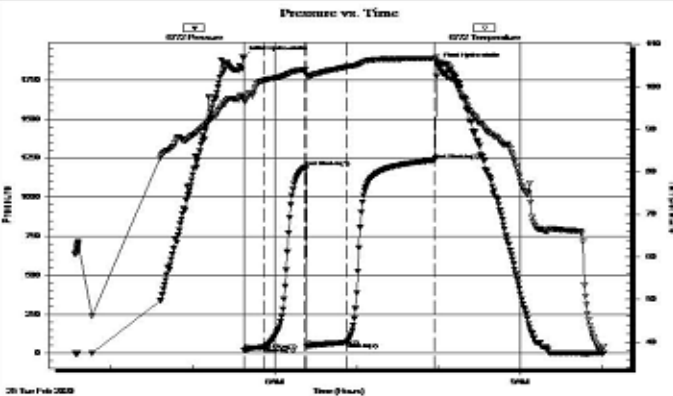
Last Calib.: 2020.02.25

Start Time: 03:34:01 End Time: 10:01:10

Time On Btm: 2020.02.25 @ 05:36:40

Time Off Btm: 2020.02.25 @ 07:59:00

TEST COMMENT: IF-15- built to 11"
 ISI-30- no blow back
 FF-30- BOB 20 sec total build of 36"
 FSI-60- 5" blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1897.76	97.45	Initial Hydro-static
2	19.83	96.64	Open To Flow (1)
16	39.48	101.43	Shut-in(1)
46	1191.57	104.02	End Shut-In(1)
47	45.65	102.86	Open To Flow (2)
77	70.05	104.70	Shut-in(2)
141	1235.29	106.58	End Shut-In(2)
143	1853.37	106.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	GOC 10%G 90%O	0.85
60.00	GOCM 20%G 20%O 60%M	0.42
0.00	GIP 500'	0.00

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcft/d)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3630

Lyda Rutti #2-8

ATTN: Justin Carter

Job Ticket: 65755

DST#: 5

Test Start: 2020.02.25 @ 18:35:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:03:50

Time Test Ended: 02:54:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Benny Mulligan

Unit No: 66

Interval: **3820.00 ft (KB) To 3832.00 ft (KB) (TVD)**

Reference Elevations: 1905.00 ft (KB)

Total Depth: 3832.00 ft (KB) (TVD)

1897.00 ft (CF)

Hole Diameter: 7.88 inches-Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6772

Inside

Press@RunDepth: 326.96 psig @ 3821.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.02.25

End Date:

2020.02.26

Last Calib.: 2020.02.26

Start Time: 18:35:01

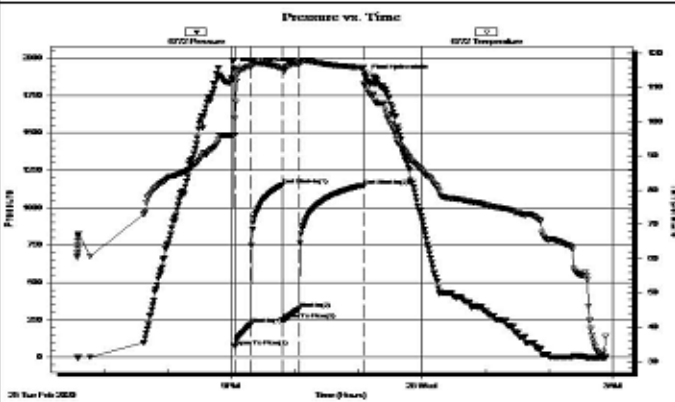
End Time:

02:54:00

Time On Btm: 2020.02.25 @ 21:02:40

Time Off Btm: 2020.02.25 @ 23:06:50

TEST COMMENT: IF-15- BOB 2min 15sec total build of 56"
ISI-30- 1/4" blow back
FF-15- BOB 2min 45sec total build of 36"
FSI-60- weak surface blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1925.15	95.97	Initial Hydro-static
2	74.93	100.80	Open To Flow (1)
16	221.80	115.82	Shut-in(1)
46	1151.65	115.56	End Shut-In(1)
47	252.91	115.19	Open To Flow (2)
62	326.96	116.77	Shut-in(2)
122	1145.36	115.76	End Shut-In(2)
125	1880.34	110.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
882.00	GCO 20%G 80%O	10.71

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcft)

Trilobite Testing, Inc

Ref. No: 65755

Printed: 2020.02.26 @ 08:24:24

Remarks

After careful review of the sample log, electric logs, and DST reports, the decision was made to run 5 1/2" casing to do further testing of the Simpson and Arbuckle zones in the Lyda Rutti #2-8.

Respectfully submitted,

Justin D. Carter
Consulting Geologist

ROCK TYPES

- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Congl
- Dol

- Gyp
- Igne
- Lmst
- Meta
- Mrst
- Salt
- Shale
- Shcol

- Shgy
- Sltst
- Ss
- Till
- Carb sh
- Dol
- Dtd
- Gry sh

- Sandylms
- Shale
- Sltstn
- Shlyslts
- Sltyslts
- Lms

ACCESSORIES

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomold

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr

- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff
- Chlorite
- Dol
- Sand
- Silty

- Dol
- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Sltstn

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh
- Clystn

TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackst

OTHER SYMBOLS

INTERVALS

- Core
- Dst

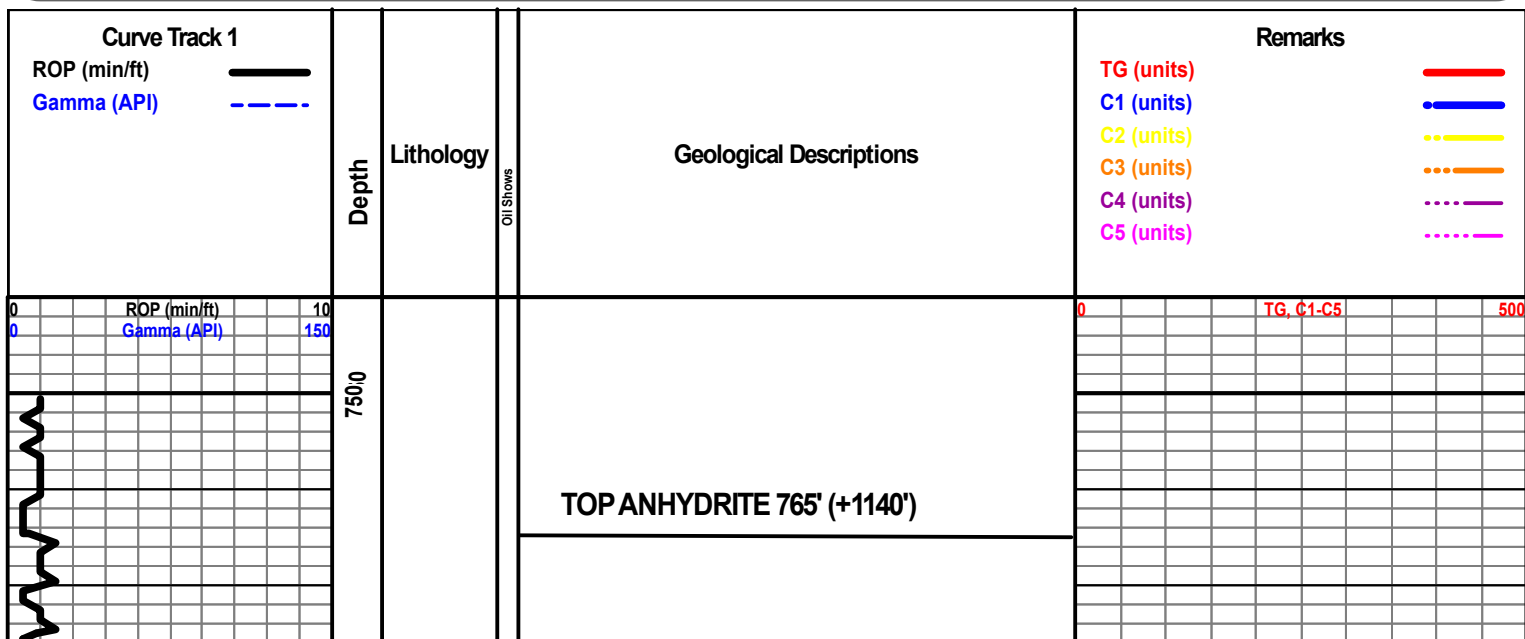
- Dst

OIL SHOWS

- Even
- Spotted

Ques

- Dead
- Gas show



BASE ANHYDRITE 784' (+1121')

ROP (min/ft) 10
Gamma (API) 150

8000

DEPTH BREAK

3050

BIT #2
HUGHES 778"
GX20-C
S/N: 5303080
3/14s
IN @435

DISPLACE HOLE @2871'

GEOLOGIST ON LOCATION 2:30 P.M. 02/21/20

3100

WT 8.8
VIS 59
LCM 1#
RPM 80
WOB 20K
PP 750

3:15 P.M. 02/21/20

LS- LT CRM, BRITT, F-XLN, GRNST TO SUB-CHLKY MTRX IP, NO FLO, PR INTER-XLN POR SCAT THRU, NS

CN

LS- TN, BRITT TO HRD IP, F/VF-XLN, GRNST, IMBED FOSS FRAGS IP, NO FLO, PR INTER-XLN POR IP TO MICRO PP POR IP, NS

25 U BG

3150

LS- LT GY, HRD, VF-XLN, GRNST IP TO SUB-CHLKY MTRX IP, IMBED FOSS FRAGS SCAT THRU, PR INTER-FOSS POR IP, NS

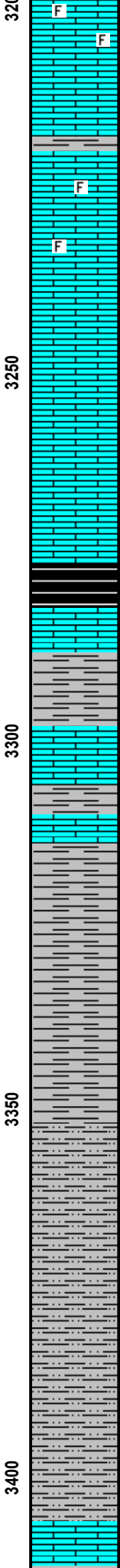
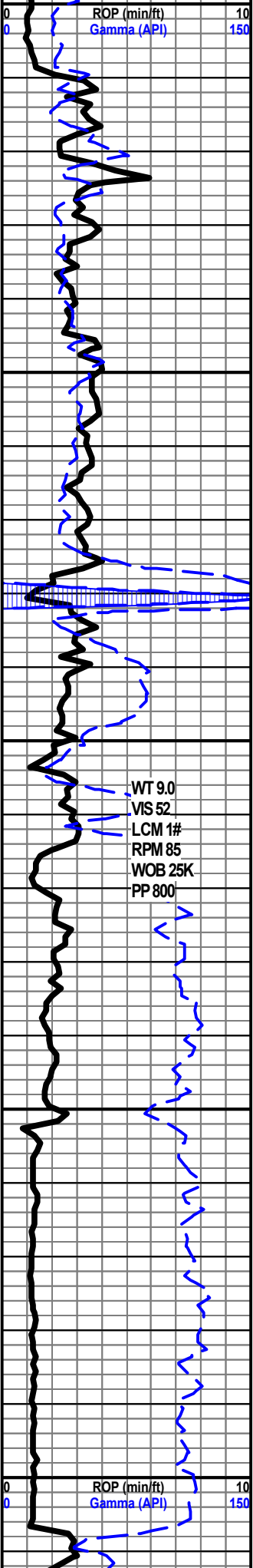
CN

LS- CRM GY, HRD TO BRITT IP, VF-XLN, GRNST IPTO SUB-CHLKY MTRX IP, IMBED FOSS FRAGS SCAT THRU, NO FLO, NO VIS POR

LS- OFF WHT, BRITT, F/VF-XLN, CHLKY MTRX THRU, IMBED FOSS FRAGS THRU, NO FLO, TR INTER-FOSS POR, NS

CN

TG, C1-C5 500



LS- CRM, BRITT TO HRD IP, F/VF-XLN, GRNST, IMBED FOSS FRAGS IP, NO FLO, PR INTER-FOSS POR IP, NS

LS- TN, HRD DNS, F-XLN, RE-XLN MTRX IP TO GRNST IP; TR IMBED FOSS FRAGS, NO FLO, NO VIS POR

LS- LT TN CRM, HRD, F/VF-XLN, GRNST TO TR RE-XLN MTRX, TR IMBED FOSS FRAGS, NO FLO, NO VIS POR

LS- CRM, HRD DNS, VF-XLN, RE-XLN MTRX IP TO GRNST IP, NO FLO, NO VIS POR

HEEBNER 3276' (-1371')

LS- TN GY, HRD DNS, VF-XLN, RE-XLN MTRX IP, IMBED SH IP, NO FLO, NO VIS POR

TORONTO 3299' (-1394')

LS- OFF WHT, BRITT TO HRD IP, F/VF-XLN, GRNST IPTO RE-XLN MTRX IP, NO FLO, TR INTER-XLN POR, NS

DOUGLAS 3314' (-1409')

SH- GY, FRM, BLKY, LMY

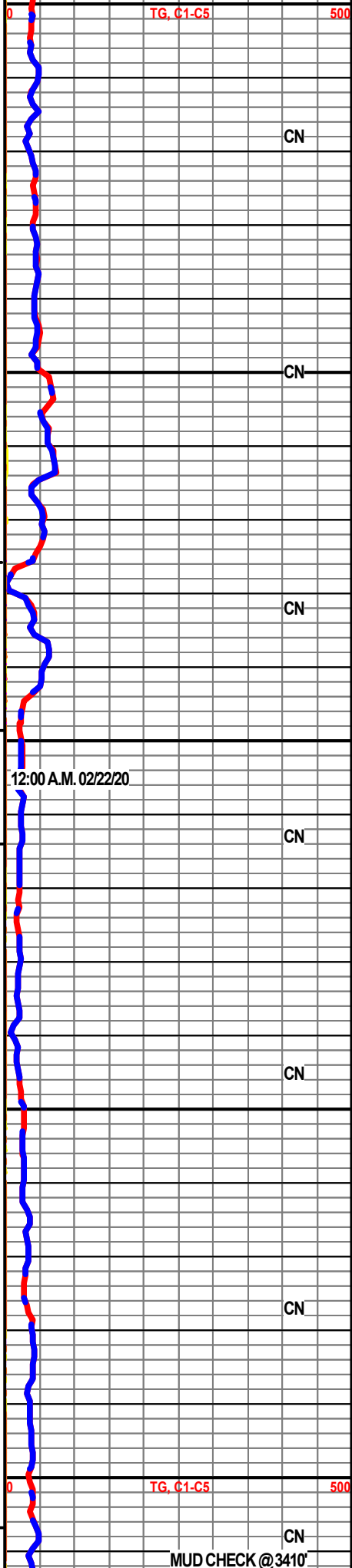
SH- GRN DK GY, FRM, BLKY, LMY

SLTST- LT GY, TT, VF-GRNS, DISS BLK SH THRU, NO VIS POR

SH- GY LT GY, TT, VF-GRNS, LMY SH IP, DISS BLK SH IP, NO VIS POR

BROWN LIME 3407' (-1502')

SHORT TRIP 25 STANDS @ 3410'



TG, C1-C5 500

CN

CN

CN

12:00 A.M. 02/22/20

CN

CN

CN

TG, C1-C5 500

CN

MUD CHECK @ 3410'
WT 9.0

LANSING 3422' (-1517')

VIS 54
LCM TR
PV 15
YP 14
PH 9.5
FIL 10.4
CAL 30
CHL 8,200

CN

LS- CRM, HRD DNS, VF-XLN, GRNST IP TO RE-XLN MTRX IP, IMBED OOL IP, NO FLO, TR INTER-OOL POR TO NO VIS POR THRU, NS

LS- LT CRM, BRITT, GRNST IP TO SUB-CHLKY MTRX IP, SFT WHT CHLK IP, DLL YEL FLO IN 80%, V/FAINT SLO BLU STRM CUT, TR INTER-XLN POR TO TR INTER-FOSS POR, NO STAIN, V/FAINT ODOR, NSFO

LS- CRM LT GY, HRD TO BRITT IP, VF-XLN, RE-XLN MTRX IP TO SUB-CHLKY MTRX IP, SFT WHT CHLK IP, IMBED OOL IP, BRIT YEL GLD FLO IN 20%, PR SLO BLU STRM CUT, TR INTER-OOL POR TO POSS FRAC POR, TN STAIN IN 40%, FAINT ODOR, NSFO

STRAP OUT @ 3470', 1.45' SHORT TO BOARD

LS- CRM, HRD DNS, CRYPTO-XLN, RE-XLN MTRX THRU, NO FLO, NO VIS POR

LS- LT TN CRM, HRD, F/VF-XLN, GRNST IP TO RE-XLN MTRX IP, IMBED DK OOL SCAT THRU, NO FLO, NO VIS CUT, PR INTER-OOL POR SCAT THRU, NS

LS- OFF WHT, BRITT, F/VF-XLN, GRNST, IMBED OOL SCAT THRU, NO FLO, PR INTER-XLN POR IP TO FR INTER-OOL POR SCAT THRU, NS

LS- CRM, HRD DNS, F/VF-XLN, RE-XLN MTRX THRU TO TR GRNST, TR OOL, NO FLO, NO VIS POR

LS- CRM, BRITT, F/VF-XLN, GRNST, SFT WHT CHLK IP, TR OOL, TR BRIT YEL GLD FLO, PR SLO BLU STRM CUT, GD OOMLD POR THRU, TR STAIN, NO ODOR, NSFO

LS- WHT, BRITT, F/VF-XLN, GRNST, IMBED OOL IP, SFT WHT CHLK IP, BRIT YEL GLD FLO IN 30%, FR FLUSH TO FR BLU STRM CUT, FR OOMLD POR THRU TO TR INTER-XLN POR, BLK LIVE STAIN IP, FAINT ODOR, NSFO

LS- CRM, BRITT, VF-XLN, GRNST, IMBED OOL IP, DLL YEL FLO IP, V/FAINT SLO BLU STRM CUT, FR OOMLD POR THRU TO TR INTER-OOL POR, TR STAIN, NO ODOR, NSFO

LS- WHT, BRITT, VF-XLN, GRNST IP TO SUB-CHLKY MTRX IP, TR OOL, TR SFT WHT CHLK, DLL YEL FLO IP, GD FLUSH TO FR FAST BLU STRM CUT, TR INTER-XLN POR TO TR MICRO PP POR, BLK LIVE STAIN SCAT THRU, FR ODOR, GAS BUBBLS, TR FREE OIL

LS- CRM WHT, HRD TO BRITT IP, VF-XLN, GRNST IP TO SUB-CHLKY MTRX IP, OOL IP, DLL YEL FLO IP TO TR BRIT YEL GLD FLO, FR FLUSH TO FR BLU STRM CUT, PR INTER-OOL POR IP TO TR OOMLD POR, DK TN/BLK STAIN SCAT THRU, FR ODOR, TR FREE OIL

12:00 A.M. 02/23/20

CN

CN

CN

CN

MUD CHECK @ 3573'
WT 9.0
VIS 63
LCM TR
PV 17
YP 19
PH 10.5
FIL 9.6
CAL 20
CHL 10,400

CN

12:00 A.M. 02/24/20

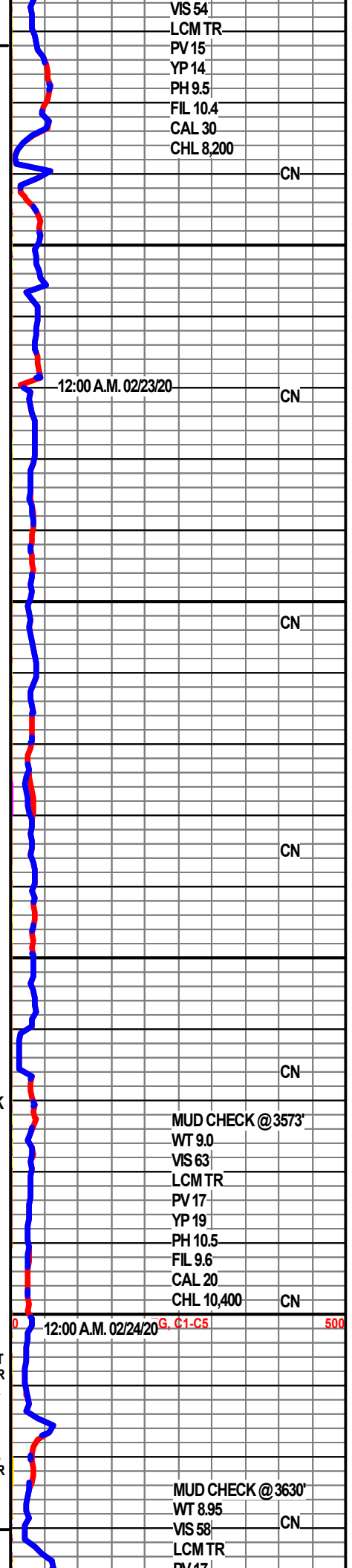
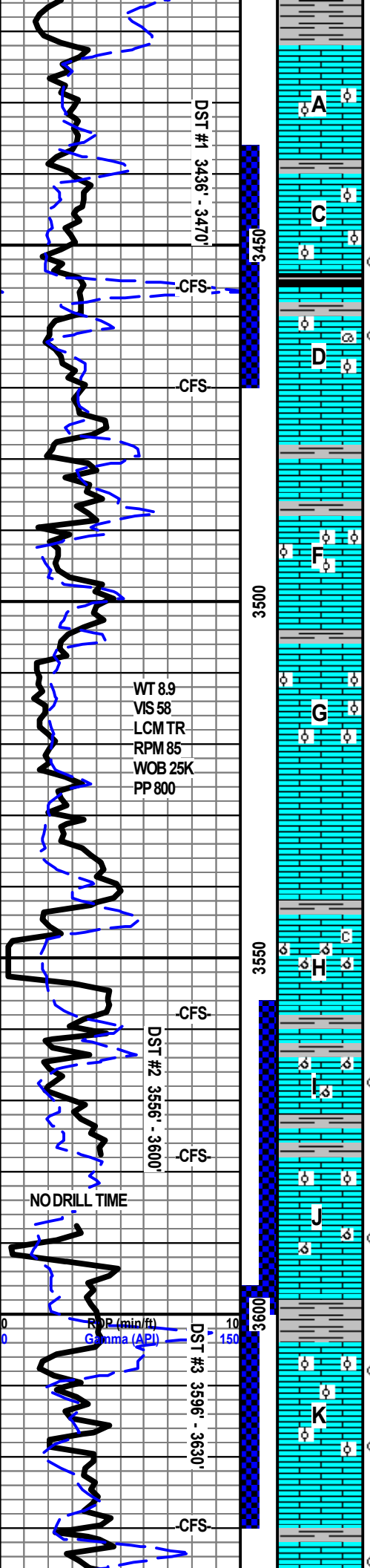
G. C1-C5

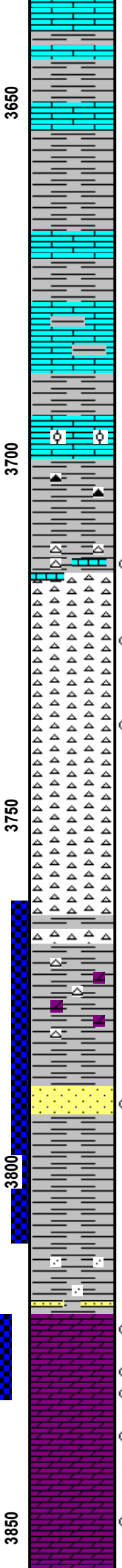
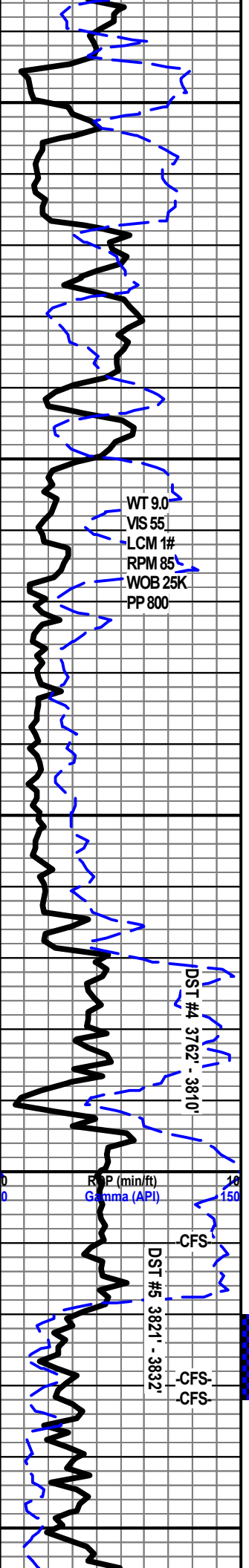
500

MUD CHECK @ 3630'
WT 8.95
VIS 58
LCM TR
PV 17

CN

BKC 3630' (-1725')





3634' LS-OFF WHT BFF, BRITT TO HRD IP, VF-XLN, SUB-CHLKY MTRX IP TO GRNST IP TO TR RE-XLN MTRX, TR IMBED OOL, DLL YEL FLO THRU, PR FLUSH TO FR FAST BLU STRM CUT, TR INTER-OOL POR, BLK LIVE STAIN IP, V/FAINT ODOR, TR FREE OIL

SH-GY GRN, FRM, BLKY, LMY IPTO SLTYIP

LS-TN, HRD DNS, CRYPTO-XLN, RE-XLN MTRX IP, IMBED SH IP, NO FLO, NO VIS POR

LS-CRM, HRD DNS, CRYPTO-XLN, RE-XLN MTRX IP, TR IMBED OOL, NO FLO, NO VIS POR

CHRT-WHT, HRD DNS, ANG, TR DLL YEL FLO, V/FAINT SLO BLU STRM CUT, POSS FRAC POR TO NO VIS POR, TR BLK STAIN, NO ODOR, SLI TR FREE OIL

VIOLA 3717' (-1812')

CHRT-WHT BRN, HRD DNS, ANG, YEL GLD FLO THRU, PR FLUSH TO PR SLO BLU STRM CUT, TN STAIN SCAT THRU, FR ODOR, GD SHOW FREE OIL

CHRT-WHT, HRD DNS, ANG, YEL GLD FLO THRU TO TR BRIT YEL GLD FLO, PR FLUSH TO PR/FR SLO BLU STRM CUT, TN STAIN IP, FR ODOR, FR/GD SHOW FREE OIL

CHRT-WHT, HRD DNS, ANG, TR YEL GLD FLO, NO VIS CUT, TR TN STAIN, FAINT ODOR, NSFO

SIMPSON 3764' (-1859')

SH-GY PRPLE GRN, FRM, BLKY, LMY, TR CHRT, TR VF-XLN SUCRO DOLO W/ FREE OIL GAS BUBBLS

SS-WHT BRN, FRI, F-GRNS, FR SRT, SUB-ANG TO SUB-RND GRNS, SILI CMNT, BRIT YEL GLD FLO IN 40%, FR FLUSH TO FR BLU STRM CUT, FR INTER-GRN POR THRU, LIVE OIL STAIN SCAT THRU, FR ODOR, TR FREE OIL, GAS BUBBLS

SH-GRN GY, FRM, BLKY, LMY

SH-TURQ, FRM, BLKY, IMBED F-GRN SS IP, LMY

ARBUCKLE 3819' (-1914')

DOLO-WHT TN, HRD DNS, VF-XLN, SUCRO MTRX THRU, TR GLAUC, YEL GLD FLO THRU, FR FLUSH TO PR/FR BLU STRM CUT, TR INTER-XLN POR, BLK LIVE STAIN IP, TR FREE OIL, FR ODOR

3831' DOLO-CRM TN, HRD DNS, FVF-XLN, RE-XLN MTRX IP TO SUCRO MTRX IP, BRIT YEL GLD FLO IN 80%, GD FLUSH TO FR/GD FAST BLU STRM CUT, TR OOMLD POR TO PR INTER-XLN POR IP, BLK LIVE STAIN IP, STRNG ODOR, FR SHOW FR OIL, GAS BUBBLS

3838' DOLO-BFF, HRD DNS, F-XLN, SUCRO MTRX THRU, TR SFT WHT CHLK, DLL YEL GLD FLO THRU, FR FLUSH TO FR BLU STRM CUT, PR/FR INTER-XLN POR THRU TO TR VUG POR, BLK LIVE STAIN IN 40%, STRNG ODOR, GD SHOW FREE OIL

PV 17
YP 20
PH 10.0
FIL 13.2
CAL 20
CHL 15,200

CN

CN

CN

CN

CN

CN

CN

12:00 A.M. 02/25/20

TG, C1-C5

500

12:00 A.M. 02/26/20

MUD CHECK @ 3810'

WT 9.4

VIS 58

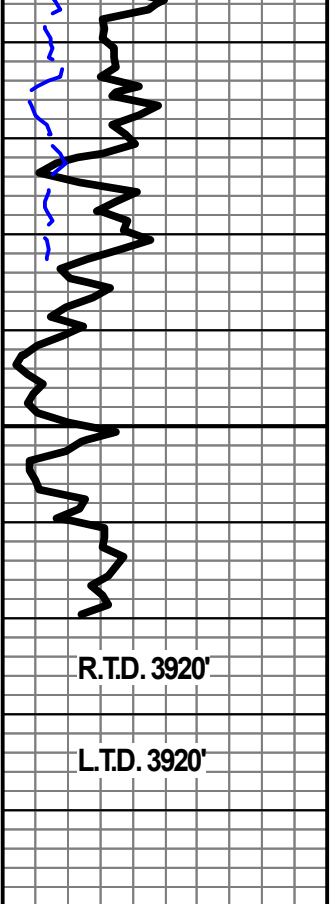
LCM TR

PV 16

YP 21

PH 10.0

FIL 11.2

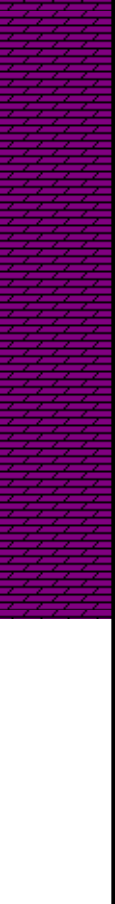


R.T.D. 3920'

L.T.D. 3920'

3900

50



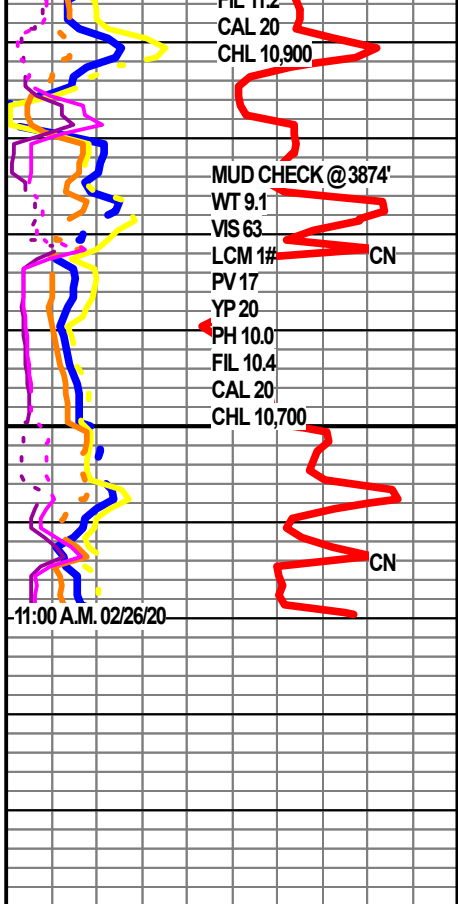
3850' DOLO- WHT BFF; HRD DNS, F-XLN, SUCRO MTRX THRU, DLL YEL GLD FLO THRU, PR/FR FLUSH TO GD BLU STRM CUT, PR/FR INTER-XLN POR THRU, BLK LIVE STAIN IN 20%, STRNG ODOR, TR FREE OIL

3865' DOLO- CRM, HRD DNS, MD/F-XLN, SUCRO MTRX THRU, TR WHT CHRT, DLL YEL GLD FLO THRU, FAINT FLUSH TO FR SLO BLU STRM CUT, TR BLK LIVE STAIN, STRNG ODOR, TR FREE OIL

DOLO- TN, HRD DNS, MD/F-XLN, SUCRO MTRX THRU, DLL YEL GLD FLO THRU, NO VIS CUT, FR/GD INTER-XLN POR TO TR VUG POR, STRNG ODOR, TR FREE OIL

DOLO- CRM LT TN, HRD DNS, MD/F-XLN, SUCRO MTRX THRU, TR SFT WHT CHLK, DLL YEL GLD FLO THRU, NO VIS CUT, FR INTER-XLN POR THRU, FR ODOR

FINISH E-LOGS 4:30 P.M. 02/26/20



CAL 20

CHL 10,900

MUD CHECK @ 3874'

WT 9.1

VIS 63

LCM 1#

PV 17

YP 20

PH 10.0

FIL 10.4

CAL 20

CHL 10,700

CN

CN

11:00 A.M. 02/26/20

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071

Home Office P.O. Box 32 Russell, KS 67665

No. 1896

Cell 785-324-1041

Date	2-27-20	Sec.	8	Twp.	22	Range	13	County	Stafford	State	Ks	On Location		Finish	5:15 AM
Lease	Lyda Rutti							Well No.	2-8		Owner	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Contractor	Discovery #2							Location		281 - K-19, 1W, 7/8 S, W/into					
Type Job	Longstring							Charge To	JEL Resources						
Hole Size	7 7/8"		T.D.	3920'		Depth		3918.45'							
Csg.	5 1/2" 15.50# New		Depth												
Tbg. Size			Depth												
Tool			Depth		The above was done to satisfaction and supervision of owner agent or contractor.										
Cement Left in Csg.	42.03'		Shoe Joint		42.03'		Cement Amount Ordered		1750 Proc 10% salt 8% Gilsomite						
Meas Line	Displace		92 1/4 BLS		500 gal mud Clear 48, 20 BLS KCL										
EQUIPMENT															
Pumptrk	5	No.	Cementer	David		Helper		Common 175 Q proc C							
Bulktrk	15	No.	Driver	Tom		Driver		Poz. Mix							
Bulktrk	p.u.	No.	Driver	Rick		Driver		Gel.							
JOB SERVICES & REMARKS															
Remarks:	Hulls KCL 2 gal														
Rat Hole	30 5x		Salt		14										
Mouse Hole	20 5x		Flowseal		75										
Centralizers	1, 3, 5, 7, 9, 11, 13, 15		Kol-Seal		250 #										
Baskets	17		Mud CLR 48		500 gallon										
D/V or Port Collar	pipe on bottom break Circulation												CFL-117 or CD110 CAF 38		
	pump 500 gal mud Clear 48 plug Rat												Handling 196		
	+ mouse holes. Hook to 5 1/2" casing												Mileage		
	+ mix 125 5x Cement. Shut down.												FLOAT EQUIPMENT		
	wash pump + lines Released plug												Guide Shoe		
	+ Displaced w/ 92 1/4 BLS. of H2O.												Centralizer 8		
	First 20 BLS KCL.												Baskets 1		
	Released + held.												AFU Inserts		
	Lift pressure 800 #.												Float Shoe 1		
	Land plug to 1500 #.												Latch Down 1		
													Pumptrk Charge	prod string	
													Mileage	17	
X Signature														Tax	
														Discount	
														Total Charge	

GENERAL TERMS AND CONDITIONS

DEFINITIONS: In these terms and conditions, "Quality" shall mean Quality Oilwell Cementing, Inc., and "Customer" shall refer to the party identified by that term on the front of this contract. As applicable, "Job" relates to the services described on the front side of this contract, "merchandise" refers to the material described on the front of this contract and to any other materials, products, or supplies used, sold, or furnished under the requirements of this contract.

– **TERMS:** Unless satisfactory credit has been established, "CUSTOMER" must tender full cash payment to "QUALITY" before the job is undertaken or merchandise is delivered. If satisfactory credit has been established, the terms of payment for the job and/or merchandise, including bulk cement, are net cash, payable in 30 days from the completion of the job and/or delivery of the merchandise. For all past due invoices, "CUSTOMER" agrees to pay interest on amounts invoiced at a rate of 18 percent per annum until paid. Notwithstanding the foregoing in no event shall this Contract provide for interest exceeding the maximum rate of interest that "CUSTOMER" may agree to pay under applicable law. If any such interest should be provided for, it shall be and hereby is deemed to be a mistake, and this contract shall be automatically reformed to lower the rate of interest to the maximum legal contract rate, any amounts previously paid as excess interest shall be deducted from the amounts owing from the "CUSTOMER" or at the option of "QUALITY," refunded directly to "CUSTOMER." For purposes of this paragraph, QUALITY and CUSTOMER agree that KANSAS law shall apply. Any discounts granted with this contract are null and void if the charges are not paid when due.

– **ATTORNEY FEES:** In any legal action or proceeding between the parties to enforce any of the terms of this Service Contract, or in any way pertaining to the term of this Contract, the prevailing party shall be entitled to recover all expenses, including, but not limit to, a reasonable sum as and attorney's fees.

– **PRICES AND TAXES:** All merchandise listed in "QUALITY'S" current price schedule are F.O.B. QUALITY'S local station and are subject to change without notice. All prices are exclusive of any federal, state, local, or special taxes for the sale or use of the merchandise or services listed. The amount of taxes required to be paid by QUALITY shall be added to the quoted prices charged to CUSTOMER.

– **TOWING CHARGES:** QUALITY will make a reasonable attempt to get to and from each job site using its own equipment. Should QUALITY be unable to do so because of poor or inadequate road conditions, and should it become necessary to employ a tractor or other pulling equipment to get to or from the job site, the tractor or pulling equipment will be supplied by CUSTOMER or, if furnished by QUALITY, will be charged to and paid by CUSTOMER.

– **PREPARATION CHARGES:** If a job and/or merchandise is ordered and CUSTOMER cancels the order after preparation of a chemical solution or other material, CUSTOMER will pay QUALITY for the expenses incurred by QUALITY as a result of the cancellation.

– **DEADHAUL CHARGES:** Unless otherwise specified on the front of this Contract, a deadhaul charges as set forth in QUALITY'S current price book will be charged each way for each service unit which is ordered by CUSTOMER but not used.

– **SERVICE CONDITIONS AND LIABILITIES:** 1. QUALITY carries public liability and property damage insurance, but since there are so many uncertain and unknown conditions beyond QUALITY'S control, QUALITY shall not be liable for injuries to property or persons or for loss or damage arising from the performance of the job or delivery of the merchandise. Customer shall be responsible for and indemnify, defend, and hold harmless QUALITY, its officers, agents and employees, from and against any and all claims or suits for:

(A) Damage to property or for bodily injury, sickness, disease, or death, brought by any person, including CUSTOMER and/or the well owner; and:

(B) Oil spills, pollution, surface or sub-surface damage, injury to the well, reservoir loss, or damage arising from a well blowout arising out of or in connection with QUALITY'S performance of the job or furnishing of merchandise in accordance with this contract, unless such loss or damage is caused by the willful misconduct or gross negligence of QUALITY or its employees.

2. With respect to any of QUALITY'S tools, equipment, or instruments which are lost in the well or damaged when performing or attempting to perform the job or, in the case of marine operations, are lost or damaged at any time after delivery to the landing for CUSTOMER and before return to QUALITY at the landing, CUSTOMER shall either recover the lost item without cost to QUALITY or reimburse QUALITY the current replacement cost of the item unless the loss or damage results from the sole negligence of QUALITY or its employees.

3. QUALITY does not assume any liability or responsibility for damages or conditions resulting from chemical action in cements caused by contamination of water or other fluids.

WARRANTIES: 1. QUALITY warrants all merchandise manufactured or furnished by it to be free from defects in material and workmanship under normal use and service when installed, and used, and/or serviced in the manner provided and intended. QUALITY'S obligation under this warranty is expressly limited to repair replacement, or allowance for credit, at its option, for any merchandise which is determined by QUALITY to be defective. THIS IS THE SOLE WARRANTY OF QUALITY AND NO OTHER WARRANTY IS APPLICABLE, EITHER EXPRESS OR OTHERWISE IMPLIED, IN FACT OR IN LAW, INCLUDING ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE, CUSTOMER'S sole and only remedy with regard to any defective merchandise shall be the repair or replacement thereof or allowance for credit as herein provided, and QUALITY shall not be liable for any consequential, special, incidental, or punitive damages resulting from or caused by defective materials, products or supplies.

2. More specifically:

(A) Nothing in this contract shall be construed as a warranty by QUALITY of the success or the effectiveness of the result of any work done or merchandise used, sold, or furnished under this contract.

(B) Nothing in this contract shall be construed as a warranty of the accuracy or correctness of any facts, information, or data furnished by QUALITY or any interpretation of test, meter readings, chart information, analysis or research, or recommendations made by QUALITY, unless the inaccuracy or incorrectness is caused by the willful misconduct or gross negligence of QUALITY or its employees in the preparation or furnishing of such facts, information or data. (C) Work done by QUALITY shall be under the direct supervision and control of the CUSTOMER or his agent and QUALITY will accomplish the job as an independent contractor and not as an employee or agent of the CUSTOMER.



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3830

Lyda Rutti #2-8

ATTN: Justin Carter

Job Ticket: 65755

DST#: 5

Test Start: 2020.02.25 @ 18:35:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:03:50

Time Test Ended: 02:54:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Benny Mulligan

Unit No: 66

Interval: 3820.00 ft (KB) To 3832.00 ft (KB) (TVD)

Reference Elevations: 1905.00 ft (KB)

Total Depth: 3832.00 ft (KB) (TVD)

1897.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6772

Inside

Press@RunDepth: 326.96 psig @ 3821.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.02.25

End Date:

2020.02.26

Last Calib.:

2020.02.26

Start Time: 18:35:01

End Time:

02:54:00

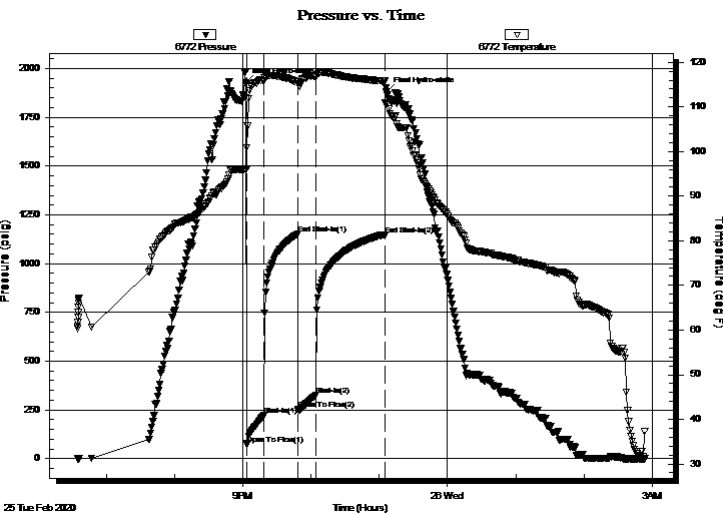
Time On Btm:

2020.02.25 @ 21:02:40

Time Off Btm:

2020.02.25 @ 23:06:50

TEST COMMENT: IF-15- BOB 2min 15sec total build of 56"
 IS-30- 1/4" blow back
 FF-15- BOB 2min 45sec total build of 36"
 FS-60- weak surface blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1925.15	95.97	Initial Hydro-static
2	74.93	100.80	Open To Flow (1)
16	221.80	115.82	Shut-In(1)
46	1151.65	115.56	End Shut-In(1)
47	252.91	115.19	Open To Flow (2)
62	326.96	116.77	Shut-In(2)
122	1145.36	115.76	End Shut-In(2)
125	1880.34	110.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
882.00	GCO 20%G 80%O	10.71

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3830

Lyda Rutti #2-8

ATTN: Justin Carter

Job Ticket: 65755

DST#: 5

Test Start: 2020.02.25 @ 18:35:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:03:50

Time Test Ended: 02:54:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Benny Mulligan

Unit No: 66

Interval: 3820.00 ft (KB) To 3832.00 ft (KB) (TVD)

Total Depth: 3832.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1905.00 ft (KB)

1897.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 6769

Outside

Press@RunDepth: psig @ 3821.00 ft (KB)

Start Date: 2020.02.25

End Date: 2020.02.26

Start Time: 18:35:01

End Time: 02:54:00

Capacity: 8000.00 psig

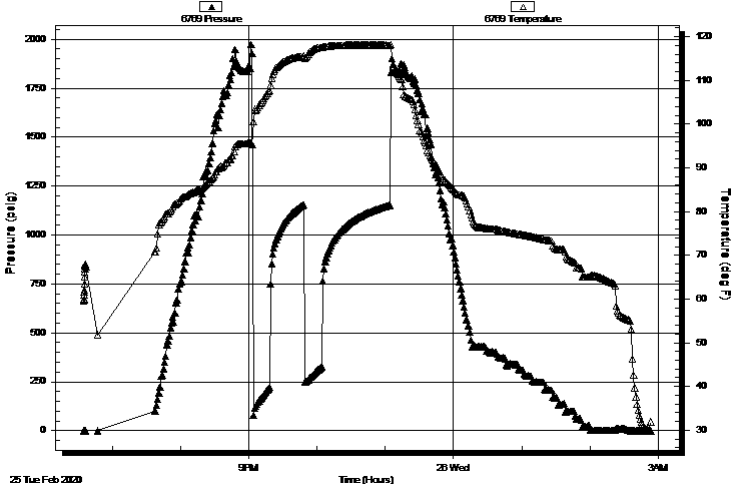
Last Calib.: 2020.02.26

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-15- BOB 2min 15sec total build of 56"
IS-30- 1/4" blow back
FF-15- BOB 2min 45sec total build of 36"
FS-60- weak surface blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
882.00	GCO 20%G 80%O	10.71

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3830

Lyda Rutti #2-8

Job Ticket: 65755

DST#: 5

ATTN: Justin Carter

Test Start: 2020.02.25 @ 18:35:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 11.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 10900.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
882.00	GCO 20%G 80%O	10.705

Total Length: 882.00 ft Total Volume: 10.705 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

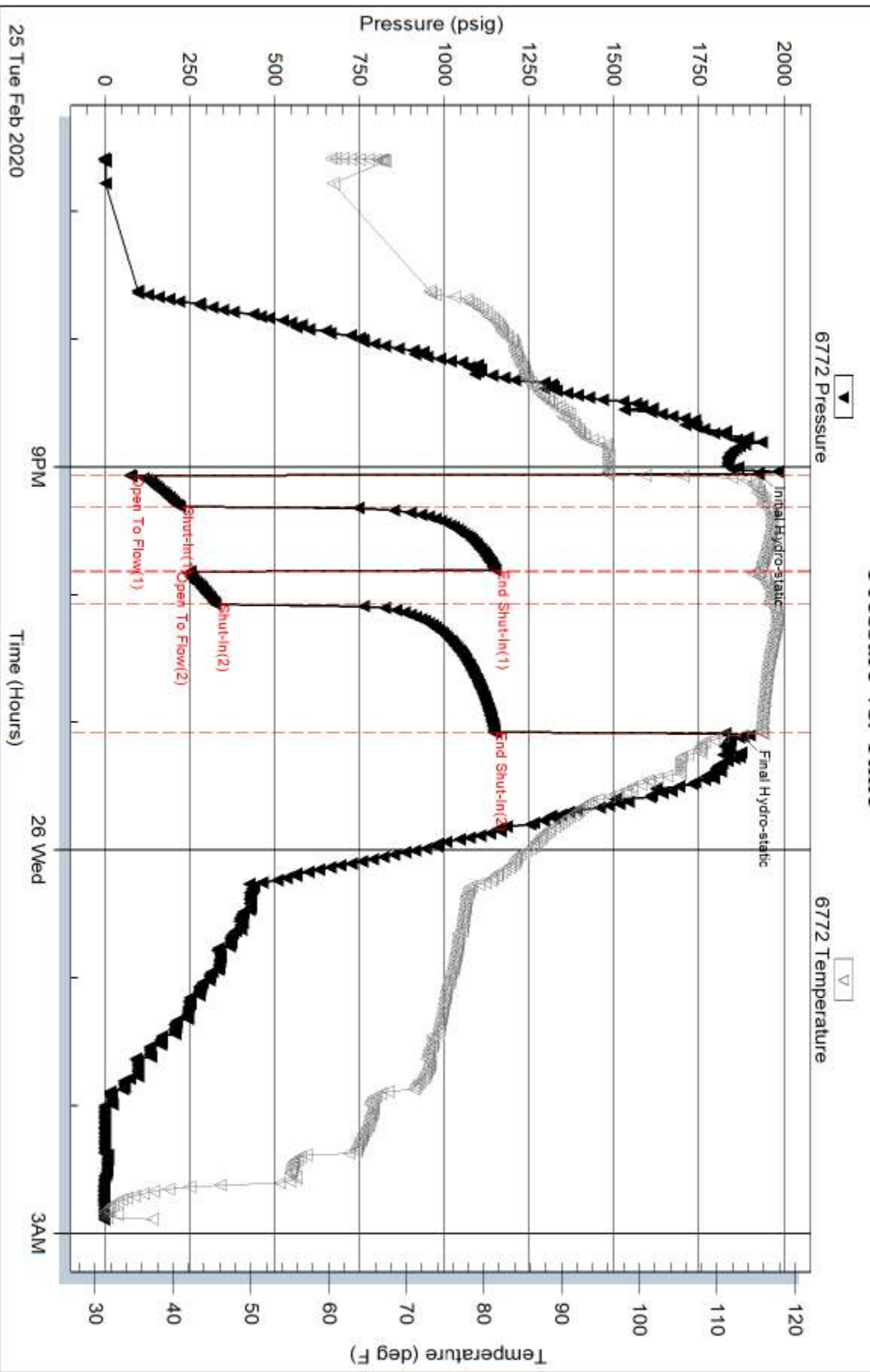
Serial #:

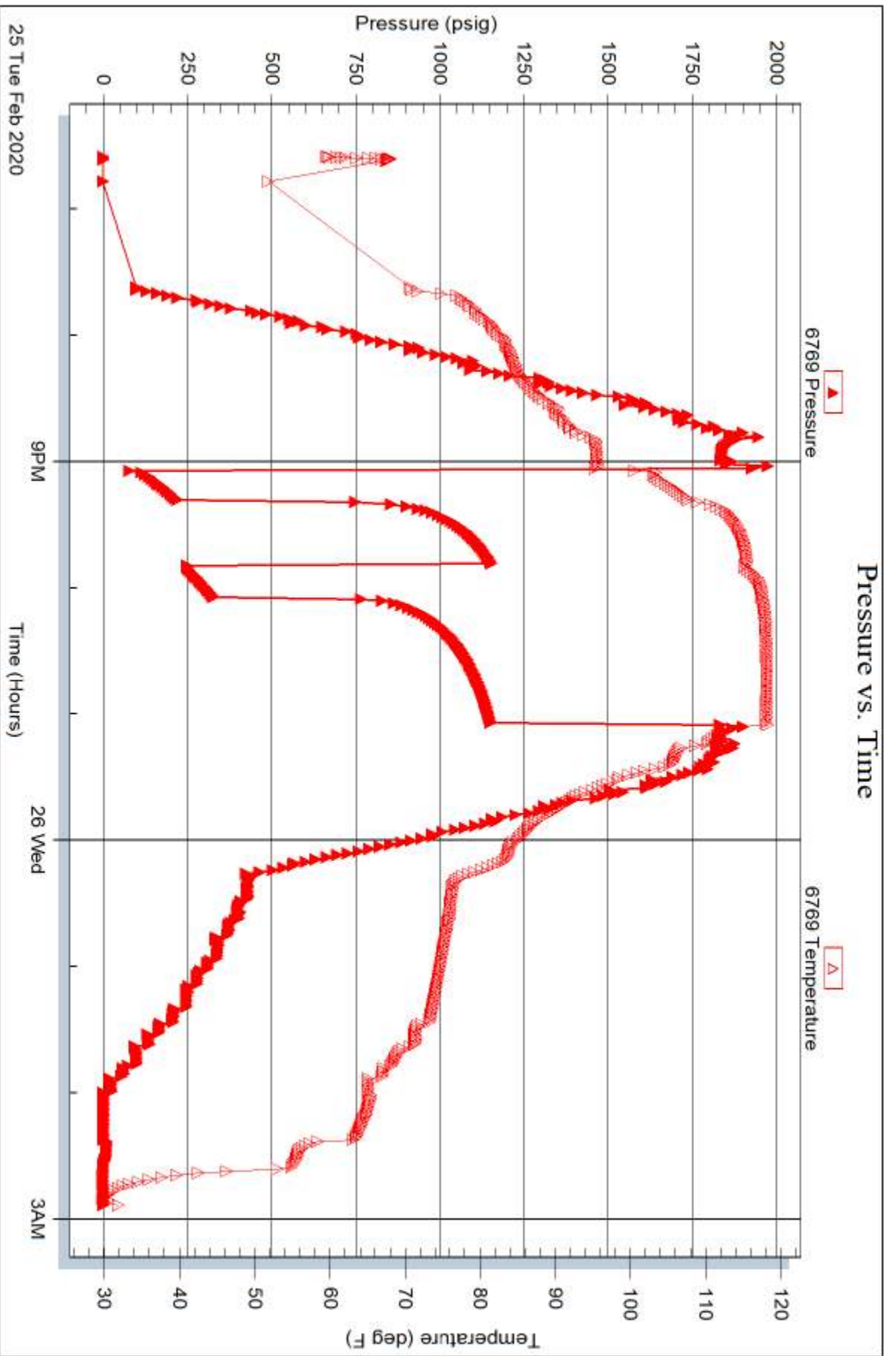
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3830

Lyda Rutti #2-8

ATTN: Justin Carter

Job Ticket: 65754

DST#: 4

Test Start: 2020.02.25 @ 03:34:00

GENERAL INFORMATION:

Formation: **Simpson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:37:50

Time Test Ended: 10:01:09

Test Type: Conventional Bottom Hole (Initial)

Tester: Benny Mulligan

Unit No: 66

Interval: 3762.00 ft (KB) To 3810.00 ft (KB) (TVD)

Reference Elevations: 1905.00 ft (KB)

Total Depth: 3810.00 ft (KB) (TVD)

1897.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6772 Inside

Press@RunDepth: 70.05 psig @ 3763.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.02.25 End Date: 2020.02.25

Last Calib.: 2020.02.25

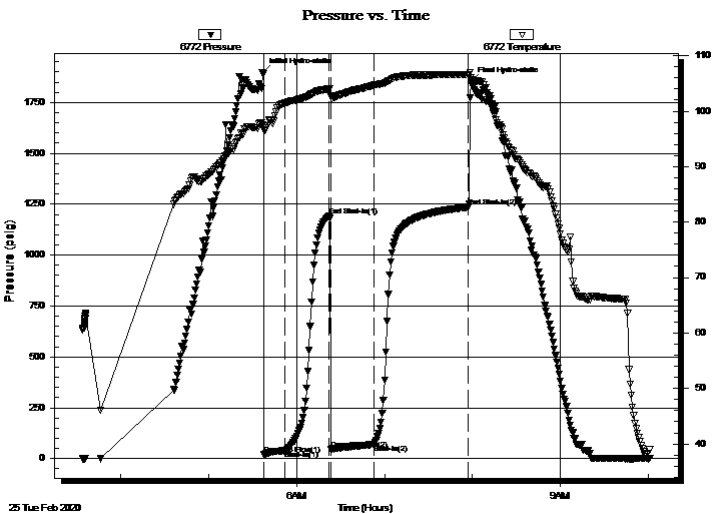
Start Time: 03:34:01 End Time: 10:01:10

Time On Btm: 2020.02.25 @ 05:36:40

Time Off Btm: 2020.02.25 @ 07:59:00

TEST COMMENT: IF-15- built to 11"
IS-30- no blow back
FF-30- BOB 20 sec total build of 36"
FS-60- 5" blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1897.76	97.45	Initial Hydro-static
2	19.83	96.64	Open To Flow (1)
16	39.48	101.43	Shut-In(1)
46	1191.57	104.02	End Shut-In(1)
47	45.65	102.86	Open To Flow (2)
77	70.05	104.70	Shut-In(2)
141	1235.29	106.58	End Shut-In(2)
143	1853.37	106.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	GCO 10%G 90%O	0.85
60.00	GOCM 20%G 20%O 60%M	0.42
0.00	GIP 500'	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3830

Lyda Rutti #2-8

ATTN: Justin Carter

Job Ticket: 65754

DST#: 4

Test Start: 2020.02.25 @ 03:34:00

GENERAL INFORMATION:

Formation: **Simpson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:37:50

Time Test Ended: 10:01:09

Test Type: Conventional Bottom Hole (Initial)

Tester: Benny Mulligan

Unit No: 66

Interval: 3762.00 ft (KB) To 3810.00 ft (KB) (TVD)

Total Depth: 3810.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1905.00 ft (KB)

1897.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 6769 Outside

Press@RunDepth: psig @ 3763.00 ft (KB)

Start Date: 2020.02.25

End Date: 2020.02.25

Capacity: 8000.00 psig

Last Calib.: 2020.02.25

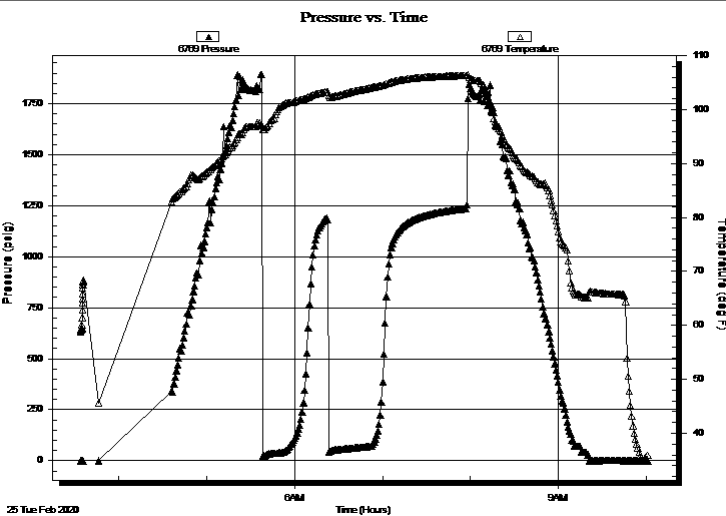
Start Time: 03:34:01

End Time: 10:01:10

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-15- built to 11"
IS-30- no blow back
FF-30- BOB 20 sec total build of 36"
FSI-60- 5" blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
120.00	GCO 10%G 90%O	0.85
60.00	GOCM 20%G 20%O 60%M	0.42
0.00	GIP 500'	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3830

Lyda Rutti #2-8

Job Ticket: 65754

DST#: 4

ATTN: Justin Carter

Test Start: 2020.02.25 @ 03:34:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

41 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 13.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 15200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	GCO 10%G 90%O	0.850
60.00	GOCM 20%G 20%O 60%M	0.425
0.00	GIP 500'	0.000

Total Length: 180.00 ft

Total Volume: 1.275 bbl

Num Fluid Samples: 0

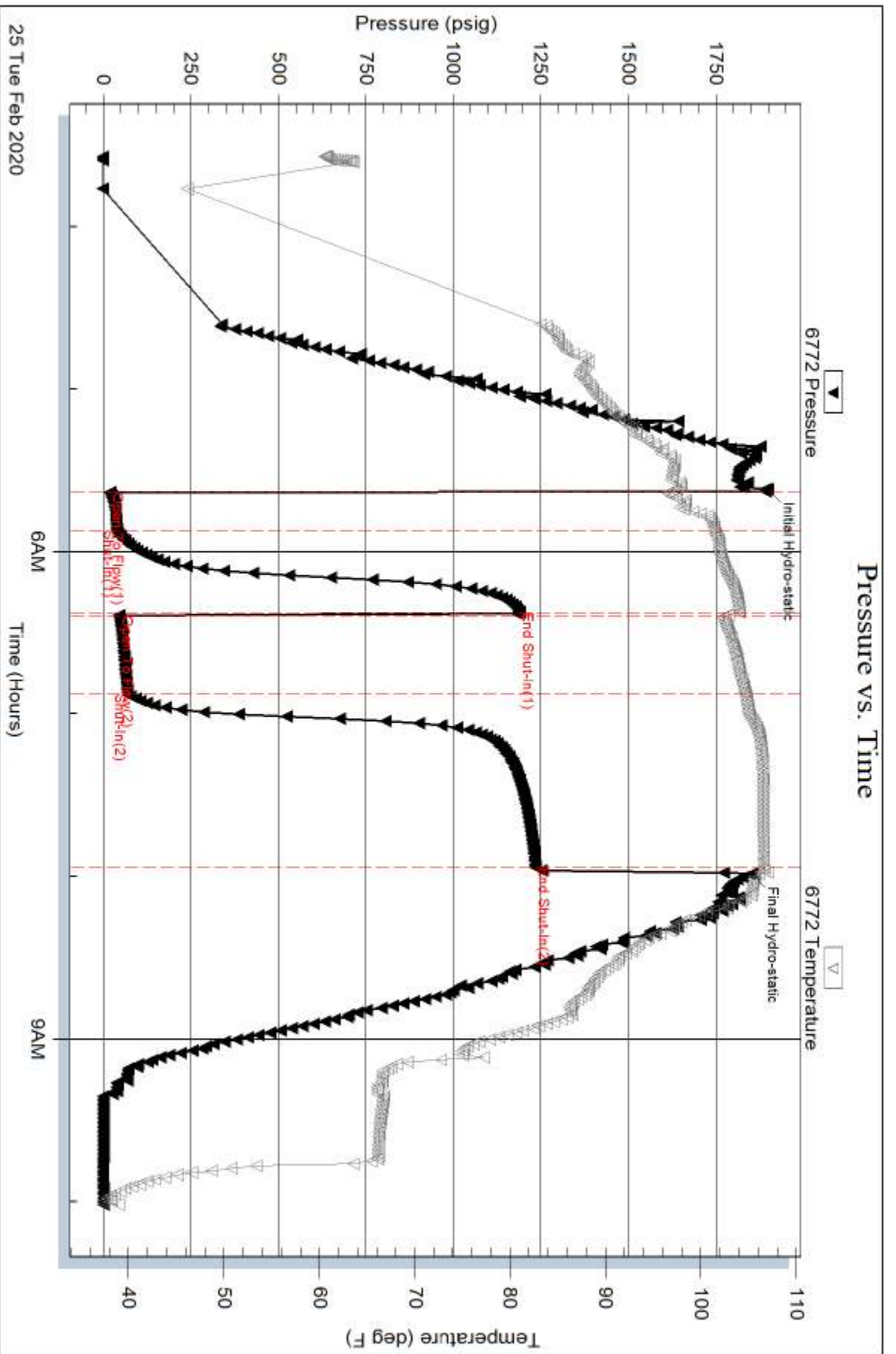
Num Gas Bombs: 0

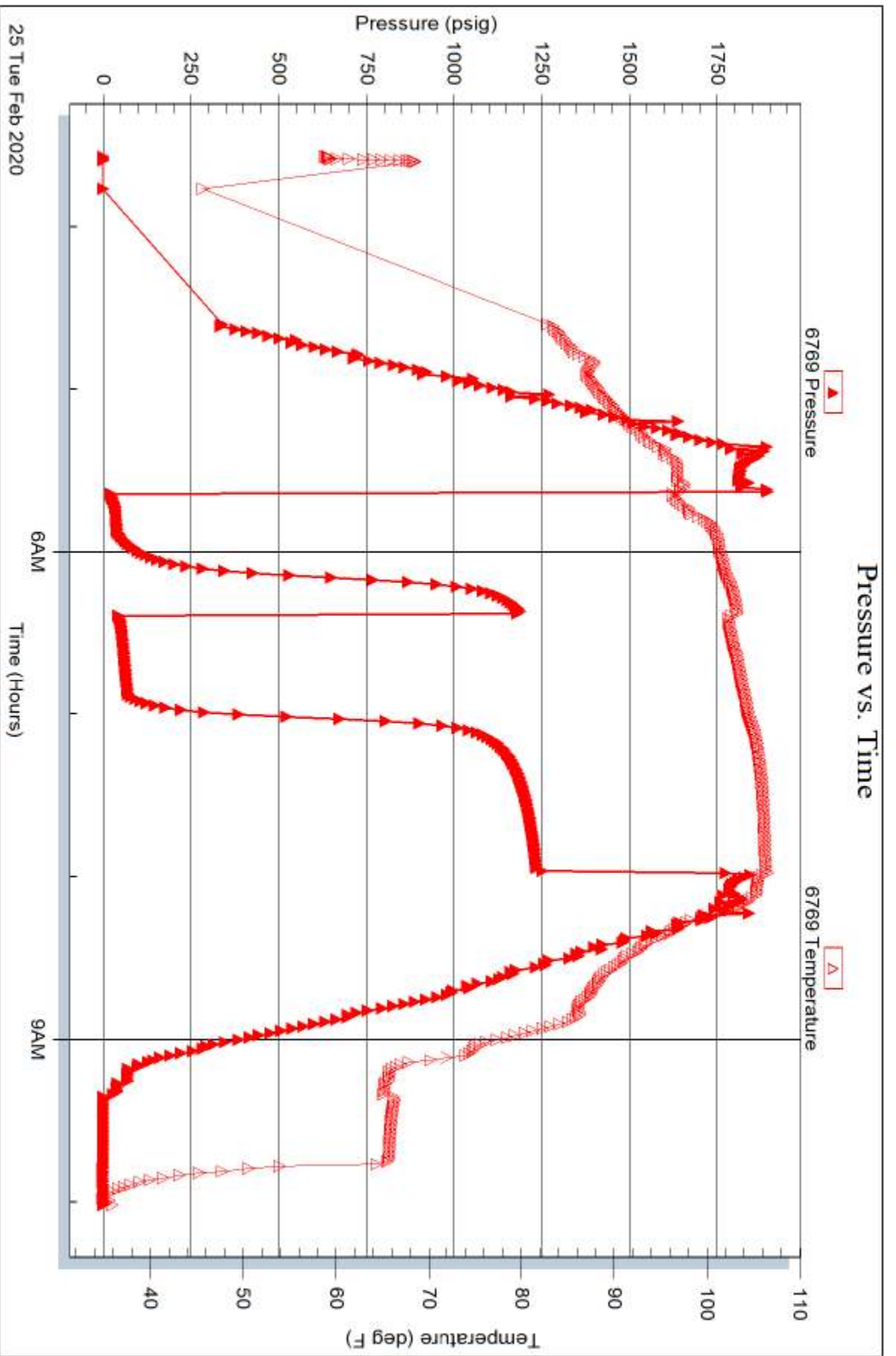
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3830

Lyda Rutti #2-8

ATTN: Justin Carter

Job Ticket: 65753

DST#: 3

Test Start: 2020.02.24 @ 05:18:00

GENERAL INFORMATION:

Formation: **LKC "K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:45:20

Time Test Ended: 11:53:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Benny Mulligan

Unit No: 66

Interval: 3596.00 ft (KB) To 3630.00 ft (KB) (TVD)

Reference Elevations: 1905.00 ft (KB)

Total Depth: 3630.00 ft (KB) (TVD)

1897.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6772 Inside

Press@RunDepth: 24.72 psig @ 3597.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.02.24

End Date:

2020.02.24

Last Calib.:

2020.02.24

Start Time: 05:18:01

End Time:

11:53:30

Time On Btm:

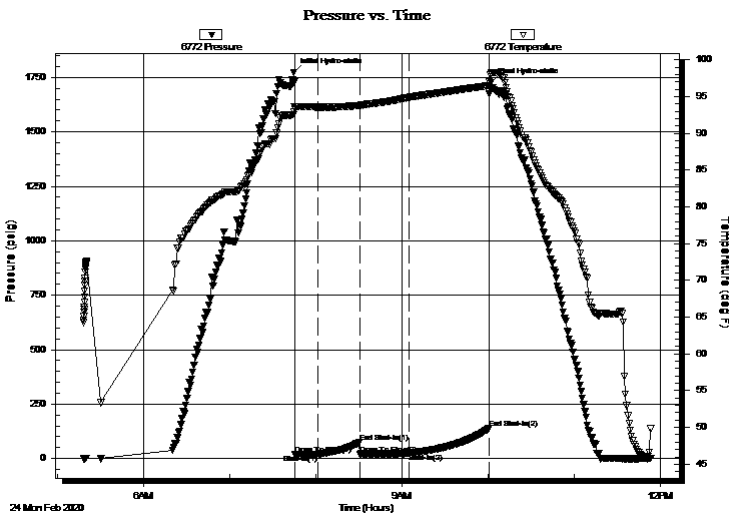
2020.02.24 @ 07:44:30

Time Off Btm:

2020.02.24 @ 10:02:00

TEST COMMENT: IF-15- built to 1"
IS-30- no blow back
FF-30- weak surface blow
FS-60- no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1772.90	93.01	Initial Hydro-static
1	20.64	93.31	Open To Flow (1)
17	20.52	93.58	Shut-In(1)
46	72.39	93.82	End Shut-In(1)
47	21.03	93.81	Open To Flow (2)
81	24.72	94.90	Shut-In(2)
136	137.56	96.50	End Shut-In(2)
138	1726.88	98.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%M	0.21

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3830

Lyda Rutti #2-8

Job Ticket: 65753

DST#: 3

ATTN: Justin Carter

Test Start: 2020.02.24 @ 05:18:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 10400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Mud 100%M	0.212

Total Length: 30.00 ft Total Volume: 0.212 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

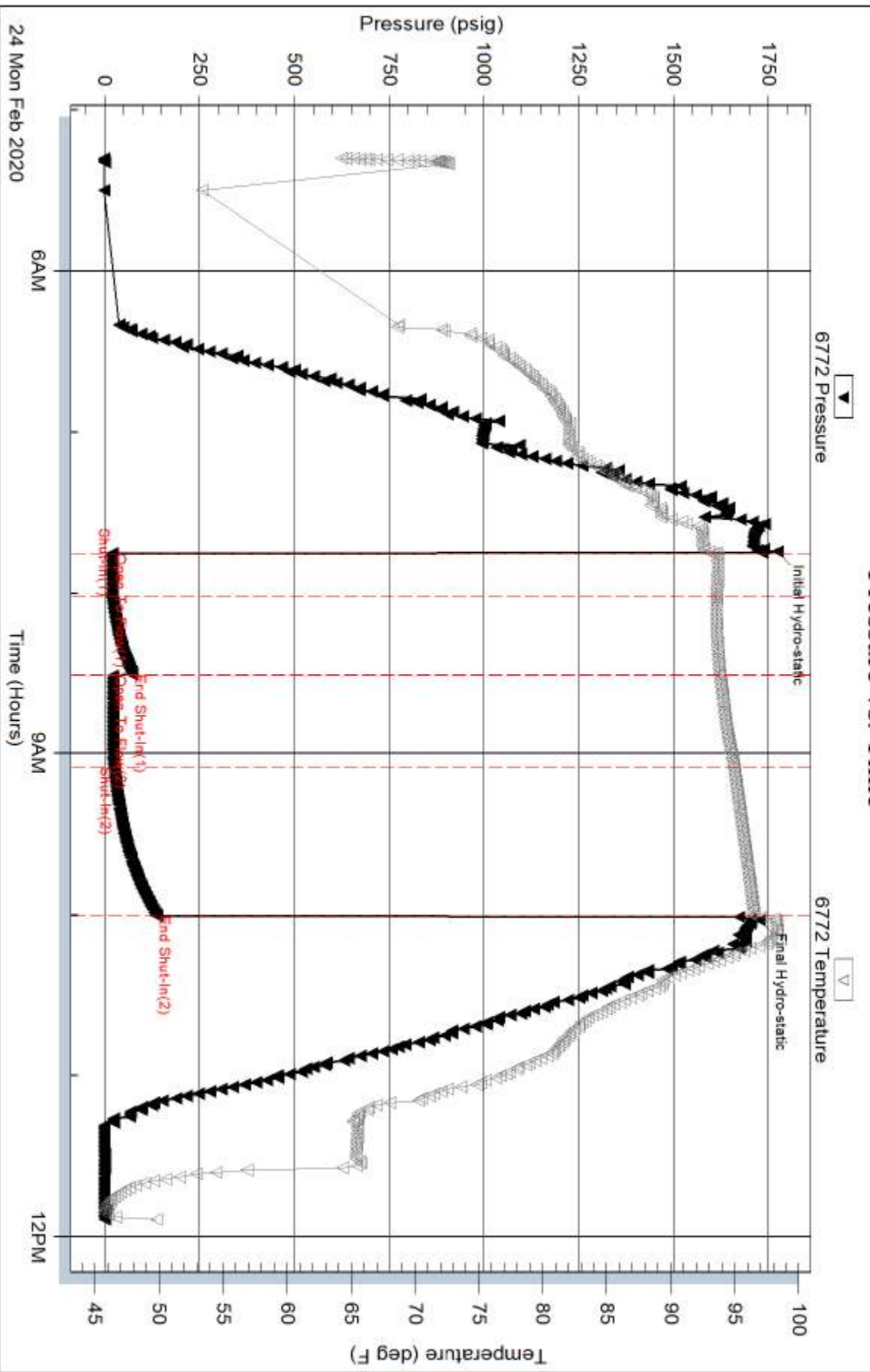
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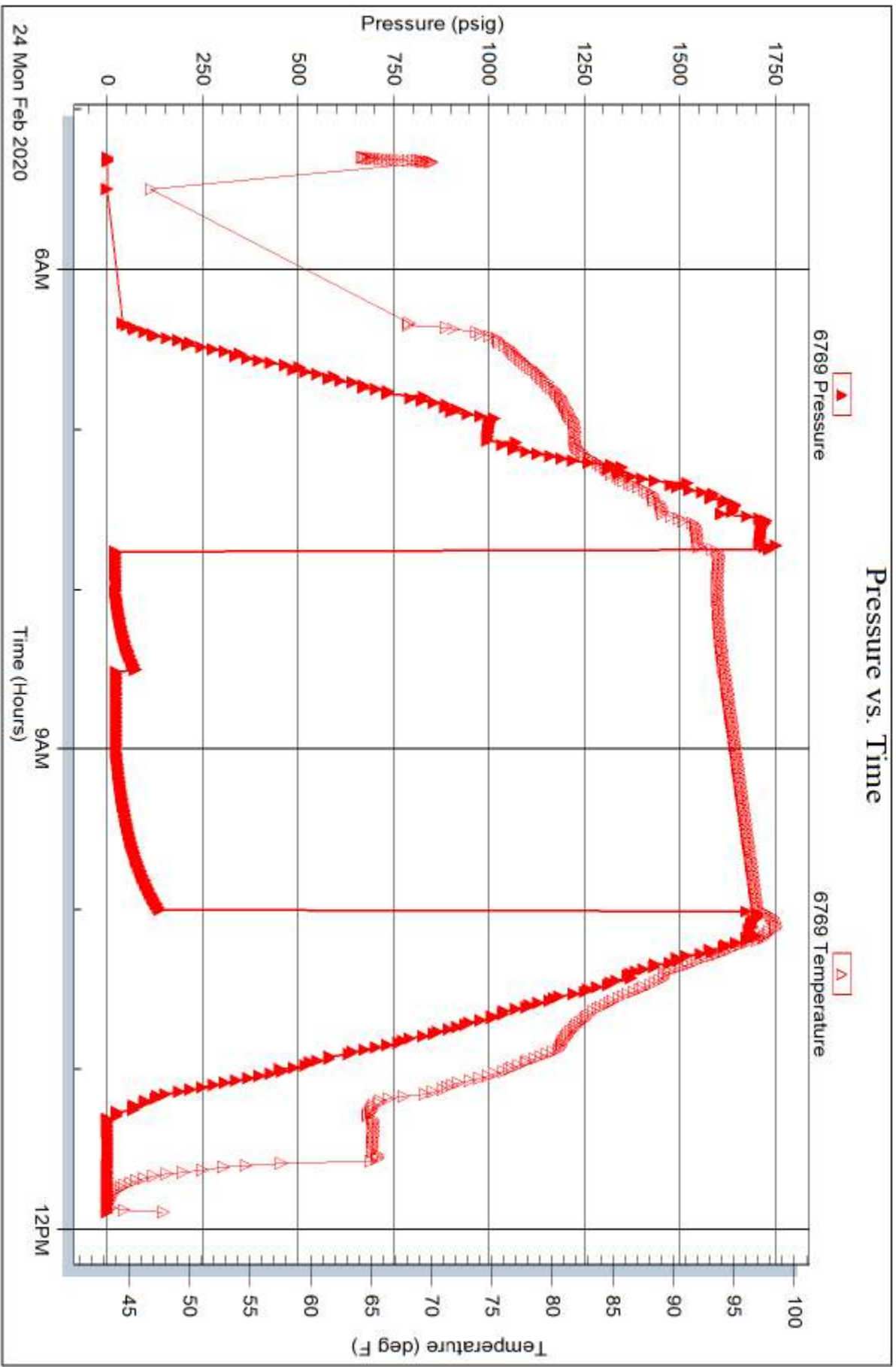
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3830

Lyda Rutti #2-8

ATTN: Justin Carter

Job Ticket: 65751

DST#: 1

Test Start: 2020.02.22 @ 15:48:00

GENERAL INFORMATION:

Formation: **Lansing C-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:15:00

Time Test Ended: 22:29:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Benny Mulligan

Unit No: 66

Interval: 3436.00 ft (KB) To 3470.00 ft (KB) (TVD)

Reference Elevations: 1905.00 ft (KB)

Total Depth: 3470.00 ft (KB) (TVD)

1897.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6772 Inside

Press@RunDepth: 52.32 psig @ 3437.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.02.22 End Date: 2020.02.22

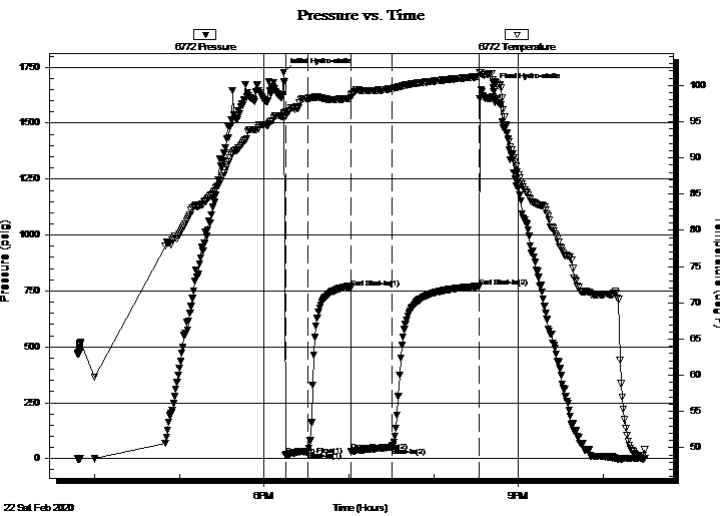
Last Calib.: 2020.02.22

Start Time: 15:48:01 End Time: 22:29:30

Time On Btm: 2020.02.22 @ 18:14:00

Time Off Btm: 2020.02.22 @ 20:41:50

TEST COMMENT: IF-15- built to 3"
IS-30- weak surface blow back
FF-30- built to 2"
FS-60- no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1726.99	96.12	Initial Hydro-static
1	15.79	95.69	Open to Flow (1)
17	31.24	98.22	Shut-In(1)
47	765.43	98.19	End Shut-In(1)
48	33.59	98.29	Open To Flow (2)
77	52.32	99.57	Shut-In(2)
138	768.72	101.21	End Shut-In(2)
148	1660.01	100.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%M	0.21
60.00	W.M. 40%W 60%M	0.42

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3830

Lyda Rutti #2-8

Job Ticket: 65751

DST#: 1

ATTN: Justin Carter

Test Start: 2020.02.22 @ 15:48:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

60000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
30.00	Mud 100%M	0.212
60.00	W.M. 40%W 60%M	0.425

Total Length: 90.00 ft Total Volume: 0.637 bbl

Num Fluid Samples: 0

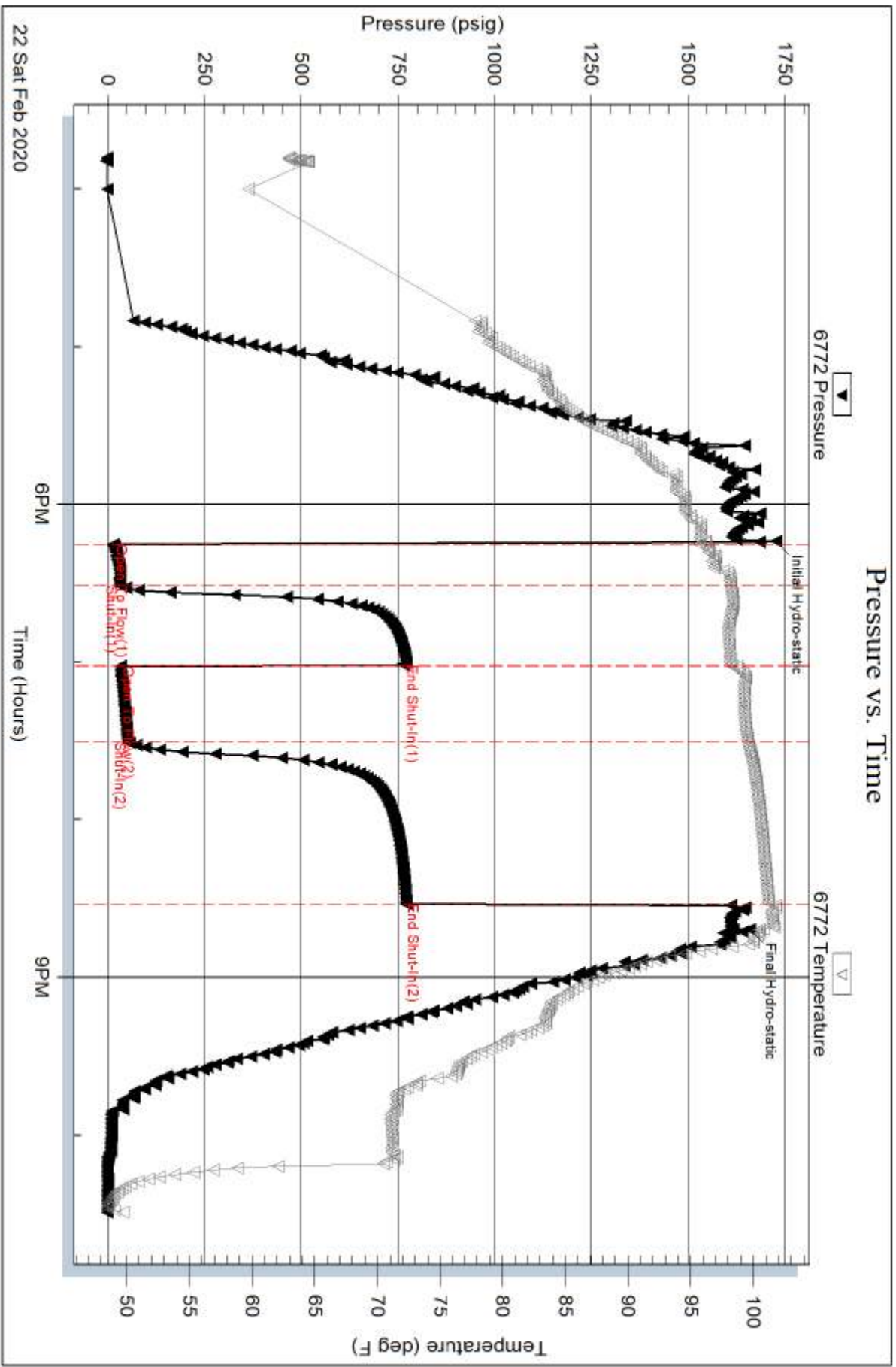
Num Gas Bombs: 0

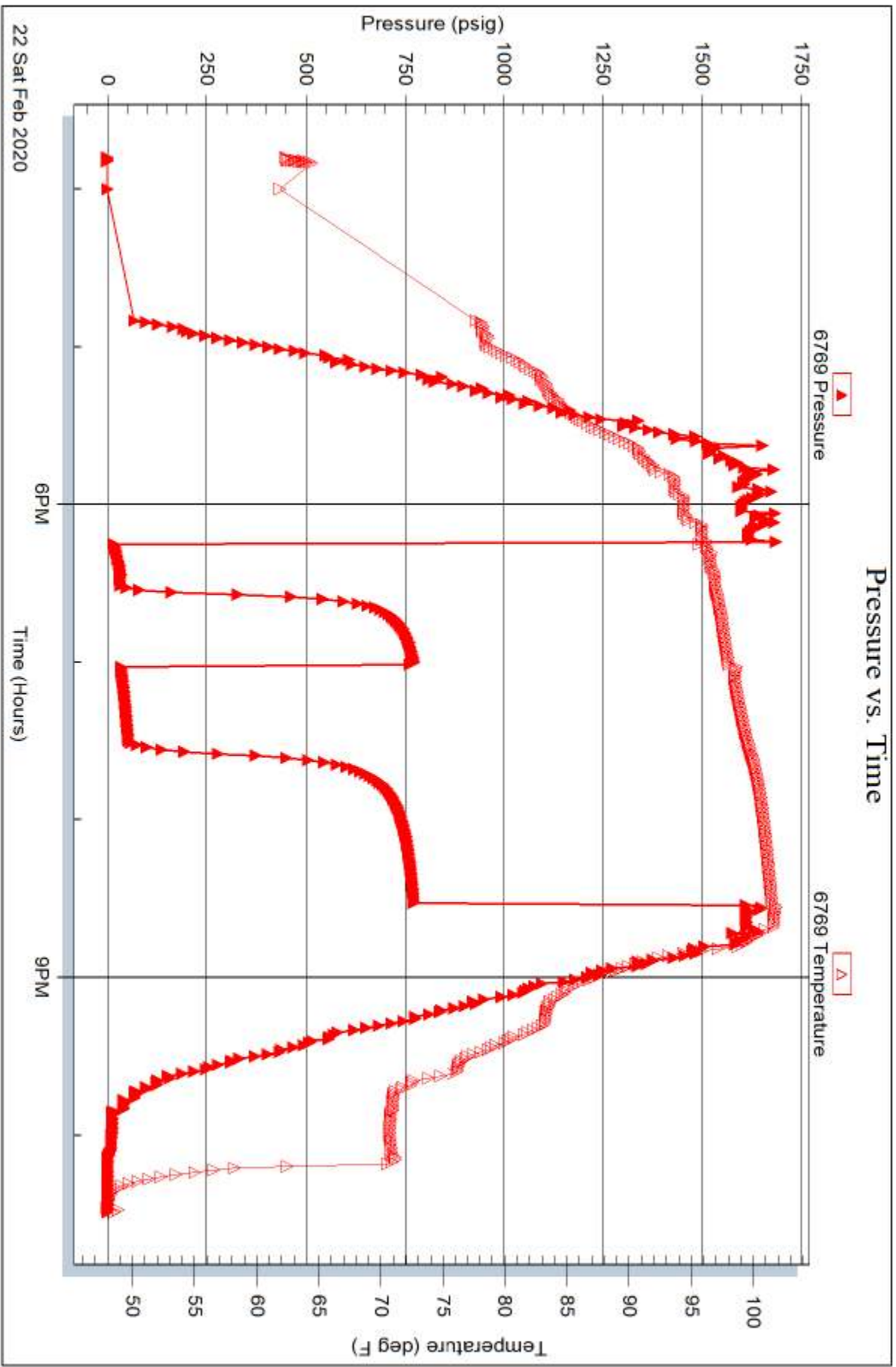
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





22 Sat Feb 2020



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3830

Lyda Rutti #2-8

ATTN: Justin Carter

Job Ticket: 65752

DST#: 2

Test Start: 2020.02.23 @ 14:14:00

GENERAL INFORMATION:

Formation: **LKC I-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:36:10

Time Test Ended: 21:15:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Benny Mulligan

Unit No: 66

Interval: 3556.00 ft (KB) To 3600.00 ft (KB) (TVD)

Reference Elevations: 1905.00 ft (KB)

Total Depth: 3600.00 ft (KB) (TVD)

1897.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6772 Inside

Press@RunDepth: 53.88 psig @ 3564.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2020.02.23

End Date:

2020.02.23

Last Calib.:

2020.02.23

Start Time: 14:14:01

End Time:

21:15:00

Time On Btm:

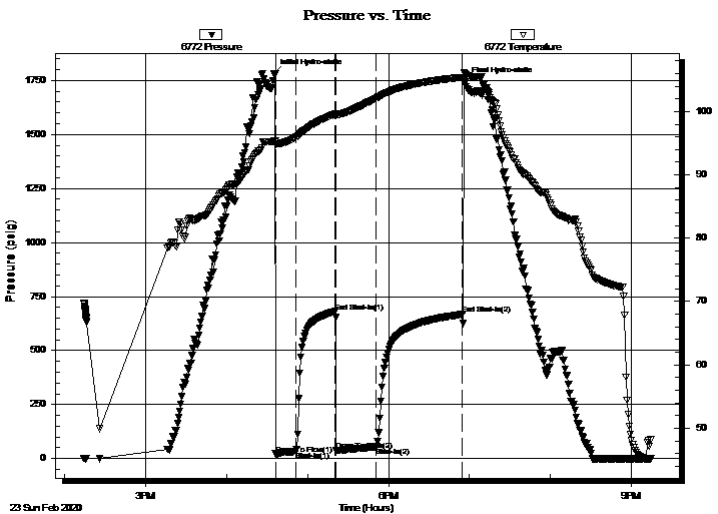
2020.02.23 @ 16:35:10

Time Off Btm:

2020.02.23 @ 18:56:39

TEST COMMENT: IF-15- buit to 2 1/2"
IS-30- no blow back
FF-30- built to 3"
FS-60- no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1781.51	95.30	Initial Hydro-static
1	21.72	94.78	Open To Flow (1)
17	32.91	95.94	Shut-In(1)
46	680.65	99.59	End Shut-In(1)
46	36.51	99.42	Open To Flow (2)
76	53.88	102.06	Shut-In(2)
140	667.65	105.40	End Shut-In(2)
142	1743.10	105.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	M.W. 40%M 60%M	0.57

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

JEL Resources LLC

8-22s-13w

1801 Broadway STE 200 Denver CO 80202+3830

Lyda Rutti #2-8

Job Ticket: 65752

DST#: 2

ATTN: Justin Carter

Test Start: 2020.02.23 @ 14:14:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 10400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	M.W. 40%M 60%M	0.567

Total Length: 80.00 ft Total Volume: 0.567 bbl

Num Fluid Samples: 0

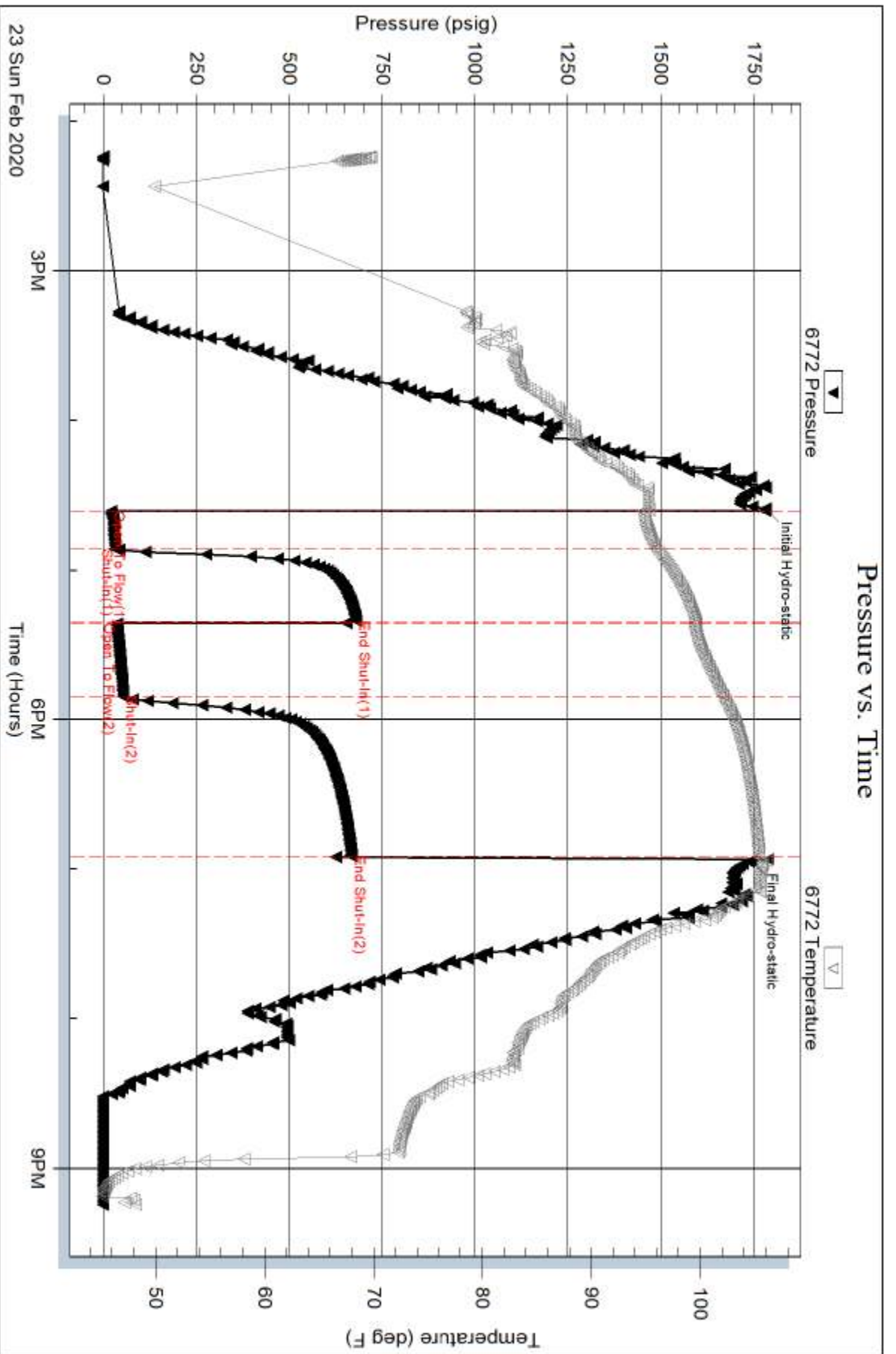
Num Gas Bombs: 0

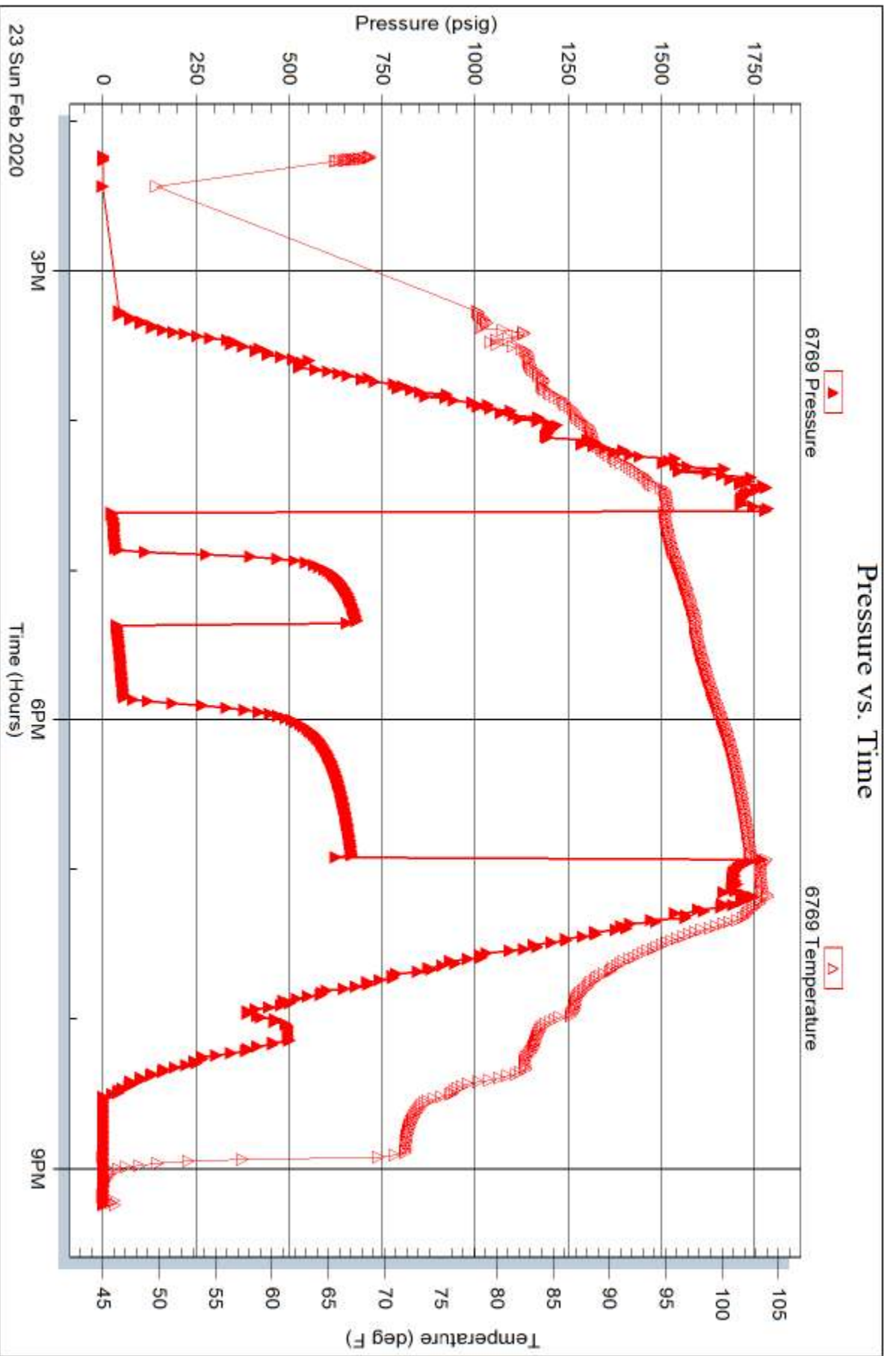
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







Conservation Division
266 N. Main St., Ste. 220
Wichita, KS 67202-1513

Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Susan K. Duffy, Chair
Dwight D. Keen, Commissioner
Andrew J. French, Commissioner

Laura Kelly, Governor

July 20, 2020

Michael Connelly
JEL Resources, LLC
1801 BROADWAY STE 200
DENVER, CO 80202-3830

Re: ACO-1
API 15-185-24066-00-00
LYDA RUTTI 2-8
SE/4 Sec.08-22S-13W
Stafford County, Kansas

Dear Michael Connelly:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 2/17/2020 and the ACO-1 was received on July 20, 2020 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 1966

Date	2-17-20	Sec. 8	Twp. 22	Range 13	County	State	On Location	Finish
					Location 2811K-19 1w 3/4 S W into			

Lease	Lyda Pitt	Well No.	7-8	Owner	To Quality Oilwell Cementing, Inc.
Contractor	D. Sperry #2	You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Type Job	Surface	Charge To	JEC Resources		
Hole Size	12 1/4	T.D.	435	Street	
Csg.	8 5/8	Depth	434	City	State
Tbg. Size		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Tool		Depth		Cement Amount Ordered	450 89/20 3/11 2/102
Cement Left in Csg.	20	Shoe Joint	20	12 # 110	
Meas Line		Displace	26.34		

EQUIPMENT				Common	
Pumptrk	No. 20	Cementor		360	
		Helper		Poz. Mix	90
Bulktrk	No.	Driver		Gel.	10 8
		Driver		Calcium	16
Bulktrk	No. 21	Driver			
		Driver			

JOB SERVICES & REMARKS		Hulls	
Remarks:		Salt	
Rat Hole		Flowseal	225 #
Mouse Hole		Kol-Seal	
Centralizers		Mud CLR 48	
Baskets		CFL-117 or CD110 CAF 38	
D/V or Port Collar		Sand	
		Handling	414
		Mileage	

FLOAT EQUIPMENT	
Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	17
Mileage	

	Tax
	Discount
	Total Charge

X Signature *[Handwritten Signature]*

